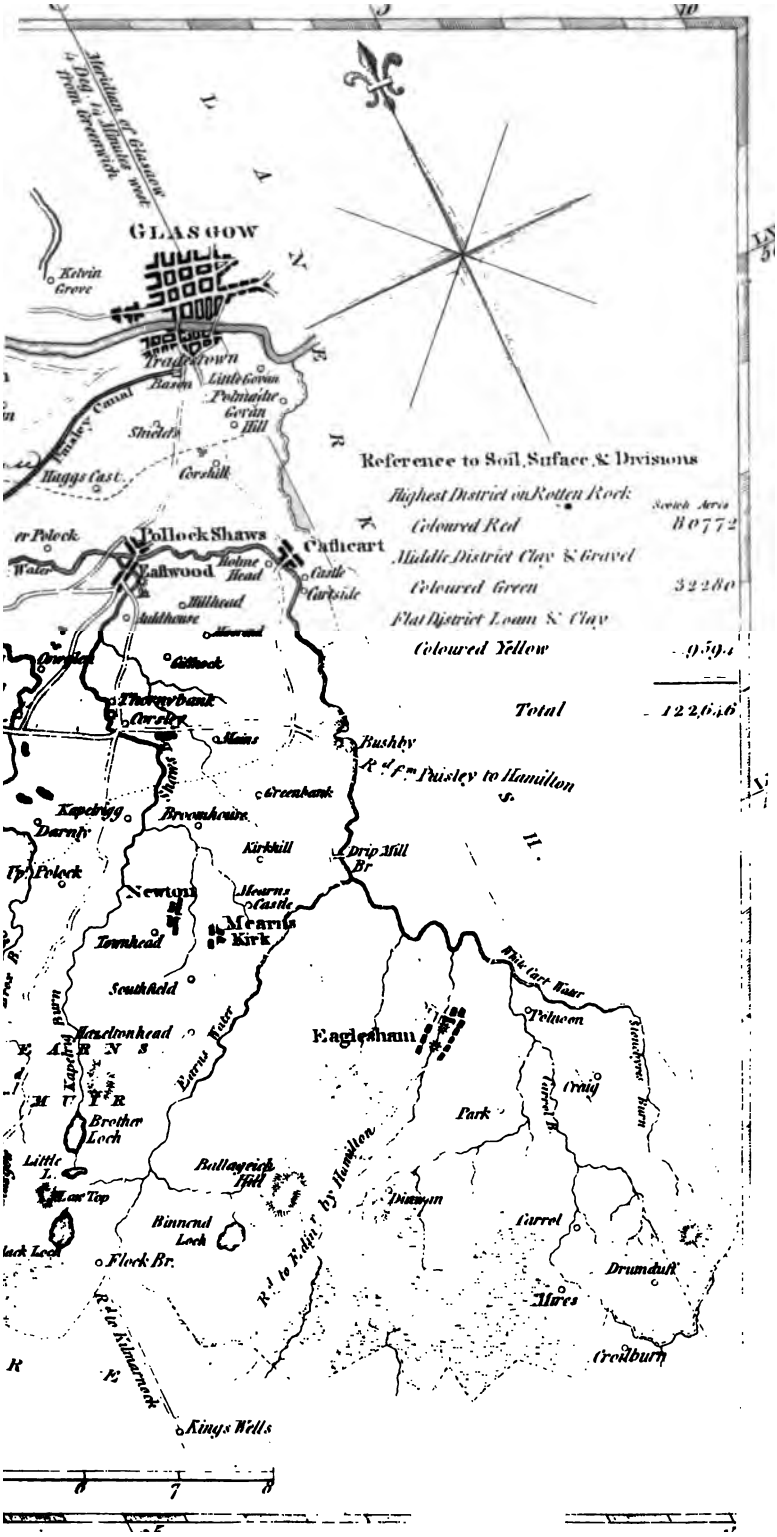
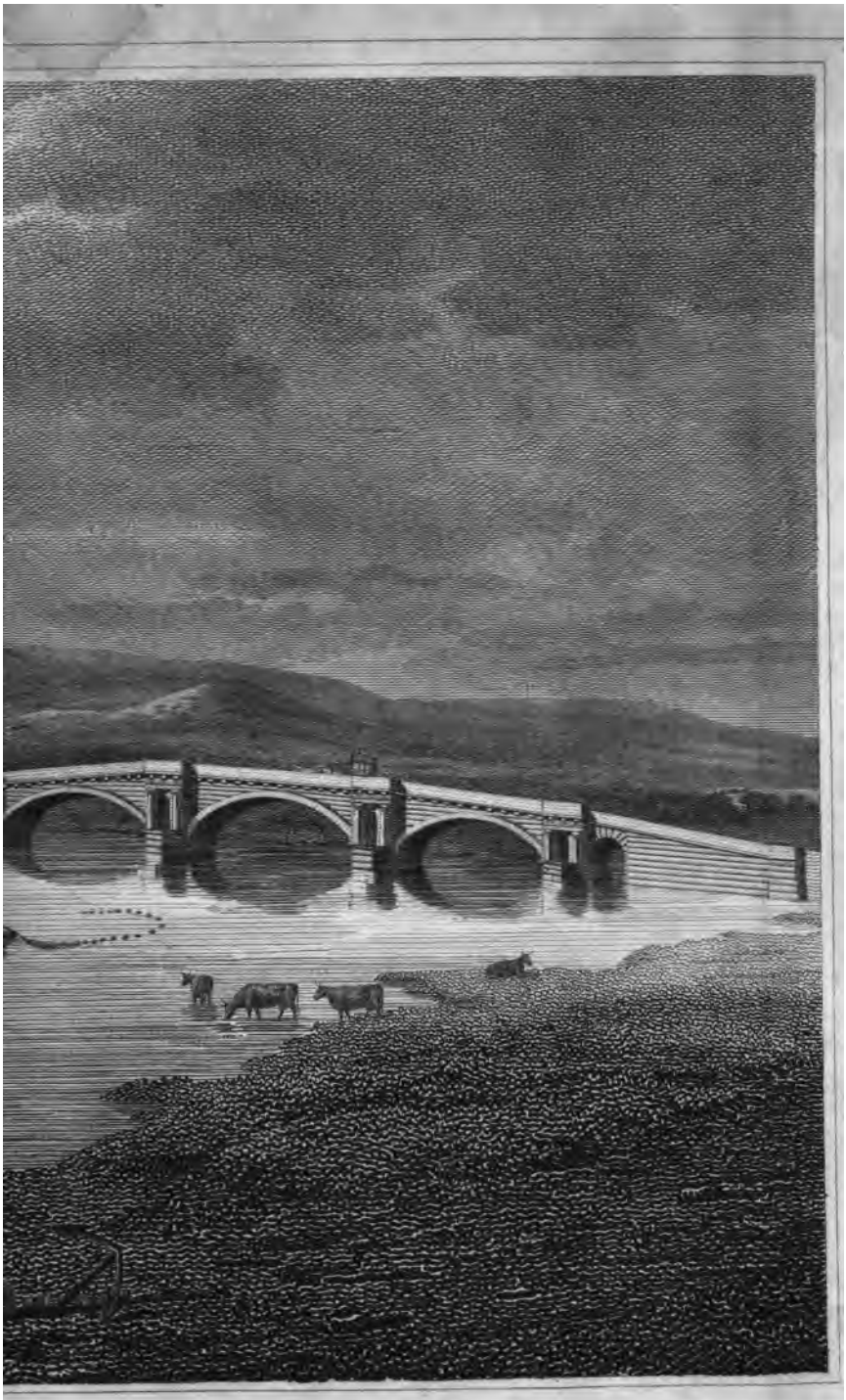
Thomas Gule
Feby- 22/1872


GLASGOW
Kelvin Grove
Tradestown
Basin
Little Govan
Polmadie
Govan Hill
Shields
Haggs Cast.
Coreshill
Reference to Soil, Suface & Divisions
Highest District on Rotten Rock
Coloured Red
Scotch Acres
80772
Middle District Clay & Gravel
Coloured Green
32280
Flat District Loam & Clay
Coloured Yellow
959.1
Total
122,646
Pollock Shaws
Cathcart
Yaffwood
Holme Head
Castle Corkside
Hillhead
Moorend
Gilbrock
Thornybank
Mains
Bushby
R.d f.m Paisley to Hamilton
Greenbank
Kapelrig
Darnly
Broomhouse
Kirkhill
Drip Mill Br
Pollock
Newton
Hearns Castle
Mearns Kirk
Townhead
Southfield
Eaglesham
Pelweon
Craig
Park
Brother Loch
Little L.
Ballagrich Hill
Binnend Loch
Flock Br.
Carrel
Drumduff
Mures
Croilburn
Kings Wells
R.d to Kilmarnock by Hamilton
R.d to Kilmarnock
Hamilton or Glasgow Dist. to Mouing week from Greenock
Paisley Canal
Kapelrig Burn
Earns Water
Pollock Cart Water
Newton Burn
7
8



R. Scott Sen

N BUCHANAN Civil Engineer.

GENERAL VIEW

OF THE

AGRICULTURE

OF

RENFREWSHIRE;

WITH

OBSERVATIONS ON THE MEANS OF ITS IMPROVEMENT;

AND

AN ACCOUNT OF ITS COMMERCE AND MANUFACTURES.

DRAWN UP FOR THE CONSIDERATION OF

THE BOARD OF AGRICULTURE,

AND INTERNAL IMPROVEMENT.

BY JOHN WILSON.

J. Thomly

" Here Art and Commerce, with auspicious reign,
" Now breathe sweet influence on the happy plain:
" In gay luxuriance Ceres too is seen
" To crown the vallies with eternal green." FALCONER.

Paisley:

Printed by Stephen Young;

AND SOLD BY G. & W. NICOL, BOOKSELLERS TO HIS MAJESTY, PALL MALL, LONDON; CONSTABLE & CO. EDINBURGH; BRASH & REID, GLASGOW; H. CRICHTON, PAISLEY; AND T. STEWART, GREENOCK.

1812.

PREFACE.

THE following Report relating to Renfrewshire was drawn up at the desire of the Board of Agriculture. Though that small district affords no extensive field for agricultural inquiries, its progress in agriculture has, of late, been so considerable, as to render it, even on that account, an object of importance; while its various manufactures and the extensive commerce carried on from its ports, give it, in these respects, the first rank among the counties of Scotland. It has therefore been thought that it would be gratifying to the public, and might be of general utility, to give some detail, not only of the facts and circumstances which respect the agriculture of this district, but of the rise and progress of its manufactures,—the gradual advance and present state of its commerce,—the influence of these on the population of the county and condition of the farmer,—their consequences with respect to the number and circumstances of the poor,—and the degree in which they contribute to the national revenue. These are objects of such acknowledged importance, and accurate information concerning

them is so necessary in order to form a just estimate of the present state of Renfrewshire, and of the intelligence, the enterprize and the industry, which so honourably characterize its inhabitants, that the author would have thought he had neglected an important part of what might be expected in a work of this nature, if he had not entered more minutely into these subjects than has been done in the Reports from other counties. The information he has been able to communicate respecting them, he flatters himself, will be found curious and interesting in itself, and intimately connected with every discussion concerning the agriculture and internal improvement of this part of the kingdom.

With respect to his sources of information, he begs leave to mention, that, his constant residence in Renfrewshire, and the habits and occupations of above thirty years have given him a pretty intimate knowledge of most of the subjects discussed in the following Report He must add, however, that his own experience and observation would have gone but a short way in compiling it: he corresponded therefore with many intelligent friends, who, he knew, were well qualified to furnish him with the information which he desired, and who were at much pains in answering every inquiry which he thought necessary to make in order to render this work as ac-

curate and useful as possible. The authentic sources from which he has thus derived his materials, enable him to give the public, what, he trusts, will be found, a faithful and satisfactory account of the shire of Renfrew. To the ministers of the several parishes; —to many gentlemen engaged in commerce and manufactures;—to the magistrates of towns;—and to gentlemen in public offices, he is indebted for much valuable information, communicated in a manner so liberal and obliging, that he shall ever reflect with pleasure on the correspondence he has held with them. To all of them he takes this opportunity of expressing his obligations, and his most grateful sense of their partial kindness. With pleasure he acknowledges the assistance he has derived from the Statistical account of Scotland. Many occasional quotations from it, and frequent references to it, will shew how highly he esteems that valuable work.

To render this Report more useful, it is accompanied with an accurate map of the county, exhibiting many minute particulars connected with the subject of the work. The public is also presented with a view of Inchinnan bridges: structures which do honour to the liberality and public spirit of the trustees upon that line of road, and to the taste and talents of the engineer who planned the works and by whom the execution of them was superintended.

To the account which will be found of them in the following pages it may be here added, that some parts of the work were attended with such peculiar difficulty, that it was necessary to drive piles to the depth of forty feet below the bed of the rivers, in order to ensure a good foundation.

In the section relating to roads, bridges and ferries, written in 1811, the author has mentioned the effect of mail coaches, which are exempted from paying toll, in injuring turnpike roads and impairing the income for supporting them; and he has stated that this subject was then under the consideration of a committee of Parliament. In 1812 a bill was brought in for discontinuing the exemption; and the prospect that it would pass both Houses of Parliament, was considered as so certain, that, in the Appendix, the consequent augmentation of revenue from turnpike roads is taken into view. The recent unexpected failure of the bill renders it necessary here to observe, that the total annual amount of those revenues must be rated at least £1000 less than is there stated: for the yearly loss in Renfrewshire is above that sum, and far exceeds that of any other county in Scotland.

Hurlet, Renfrewshire,
20th July 1812.

GENERAL

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CHAPTER III. BUILDINGS.

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CHAPTER XIII. LIVE STOCK.

CHAPTER XIV. RURAL ECONOMY.

CHAPTER XV. POLITICAL ECONOMY, &c.

APPENDIX.

THE READER IS REQUESTED TO MAKE THE FOLLOWING CORRECTIONS OR ALTERATIONS, AND TO SUPPLY THE FOLLOWING DEFECTS.

Page 13, *line* 9, *for* gravely, *read* gravel.
—— 20, —— 18, *for* landstone, *read* sandstone.
—— 28, —— 12, *for* alkaline, *read* alkali.
—— 33, —— 8, *for* from 70 to 150, *read* from 50 to 130.
—— 36, —— 10, *before* acres, *insert* Scots.
—— 40, —— 21, *omit* of entail.
—— 67, —— 29, 30, *omit* wrought harder.
—— 71, —— 12,—14, *the sentence should run thus;* There is one instance at Greenock of four acres of garden ground now affording a yearly rent of £107, and one acre and a quarter are let at £50 per acre.
—— 107, —— 7, for *rata-buga*, read *ruta-baga*.
—— 130, —— 11, *for* furface, *read* surface.
—— 131, —— 5, *for* augur, *read* auger.
—— 137, *head line*, *for* MANURING, *read* WEEDING.
—— 175, ———— *for* PROVISIONS, &c. *read* FUEL.
—— 191, *line* 29, *for* ounce, *read* pound.
—— 201, —— 5, *for* bushel, *read* quarter.
—— 279, —— 9,—12, *foot notes*, *the sentence should run thus;* the sulphat of soda and barytes have recently occurred; *omitting the remainder of that paragraph.*
—— 306, —— 6, *in the table*, *for* 48, *read* 84.
—— 320, —— 4, *in the table*, *for* 40, *read* 4.

AGRICULTURAL SURVEY

OF

RENFREWSHIRE.

CHAPTER I.

GEOGRAPHICAL STATE AND CIRCUMSTANCES.

SECTION I.—SITUATION, EXTENT, &c.

THE district in the west of Scotland which now forms the county of Renfrew, in ancient times, under the name of Strath-Gryfe, made part of the lower ward of the shire of Clydesdale. It was erected into a barony and distinct sheriffdom by Robert III. in 1404; received its present name from the burgh of Renfrew, adjoining to which the family of Stewart had long had their principal residence; gave title of Baron to the King's eldest

son; and formed an important part of the patrimonial inheritance of the Prince and Great Steward of Scotland.[a] This county lies on the south side of the Clyde, excepting about 1030 acres, which are situated on the north side of that river.[b] It is bounded by that part of Ayrshire called Cunningham on the south; by Dumbartonshire, and Argyleshire on the north and west; and by Lanarkshire on the east. Its greatest length from Drumduff, in the parish of Eaglesham, in a N. W. direction, to Cloch-point, in the parish of Innerkip, is 31½ miles; and its greatest breadth from Maich-bridge, near Kilbirnie loch, to Erskine house, in a N. E. direction, is 13¼ miles. The area is nearly 241 square miles, that is, 154,182 English, or 122,646 Scots acres, about one half of which is arable.[c] It comprehends twenty-one parishes, besides a small portion of some others, the churches of which are in the adjoining counties. Of those twenty-one parishes fifteen are country—or in old technical phraseology—landward parishes: of the other six the town of Paisley forms three, the town of Greenock two, and Port-Glasgow one. Two Parishes, Eaglesham and Cathcart,

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a See Crawford's history of Renfrewshire.

b The small portion of the county of Renfrew situated on the north of the Clyde, consists of 1030 Scots or 1294 English acres, belonging to three proprietors;

	Valuation.
Yoker and Blawarthill, Archibald Speirs, Esq.	£491 13 4
Scotston, George Oswald, Esq.	£458 0 0
Jordanhill, Archibald Smith, Esq.	£266 13 4

c There is an accurate map of the county by Mr Ainslie, and he reports that about one half is unarable.

of which last some parts lie in the county of Lanark, belong to the presbytery of Glasgow; the other nineteen compose the presbytery of Paisley.

The principal towns in the county are, the royal burgh of Renfrew, the towns of Paisley, Greenock and Port-Glasgow,[a] besides several large and populous villages. The county town is Renfrew, where are held the quarter sessions, the head courts, and meetings of freeholders for the election of the members of Parliament: but Paisley, far exceeding it in extent and population, and now the seat of the Sheriff-court, is naturally regarded as the capital. It lies in latitude 55° 51′ north, and longitude from the meridian of London about 4° 21′ west.

We have no account of this shire in any remote period, excepting those brief notices of it which occur in the more ancient histories of Scotland. George Crawford, historiographer for Scotland to Queen Anne, wrote a history of it in the early part of the last century: an edition of which, with additions pretty accurate, though expressed in a very homely manner, was published at Paisley in 1782. The account given of this district by Camden [b] 220 years ago, being very concise, it may not be improper to transcribe all he states. He says; "Upon "the banks of Clyde lies the barony of Renfrew, so "called from its principal town, which may seem "to be Ptolomy's Randvara. On the river Cart

a An account of these towns is given chap. xv.

b Camden's Britannia, first published in 1587 and afterwards 1607, Gibson's edition of 1695, p. 918.

"the ancient Baron of Cathcart hath his habitation. "Near adjoining (for this little province is full of "nobility) lies Cruikston, anciently the seat of the "Lords of Darnly, from whom by right of marriage "it came to the Earls of Lennox, whence Henry "the father of King James the VI. was called Lord "Darnly. Hawkhead, the residence of the Barons "of Ros descended originally of English blood, as "deriving their lineage from that Robert Roos of "Warke, who left England and came under the "allegiance of the King of Scots.—Paisley, formerly "a famous monastery founded by Alexander the II. "High Steward of Scotland, inferior to few for its "noble church and rich furniture; but now, by the "favour of K. James VI. it gives a seat and the "title of Baron to Claud Hamilton, a younger son "of the Duke of Chatelerault. And Sempill, whose "Lord is Baron Sempill, and by ancient right "Sheriff of this Barony. But I have read that the "title of *Baron of Renfrew*, by a *peculiar right*, "belongs to the Prince of Scotland."

Before the abolition of heritable jurisdictions in 1747, the Earl of Eglinton held the offices of heritable Sheriff of the county, and heritable Bailie of the regality of Paisley; both which jurisdictions he acquired from Lord Sempill. The Barons Rosse of Hawkhead were, from a very early period, heritable constables of Renfrew, in virtue of which office they had a right to levy certain customs at the principal fairs of that burgh. In 1793 W.m M'Dowall Esq. of Garthland was appointed His Majesty's Lieutenant of the county; which office, upon his

death in 1810, His Majesty was pleased to confer upon the Earl of Glasgow.

The county sends one member to Parliament; and the royal burgh of Renfrew, along with those of Glasgow, Rutherglen and Dumbarton, sends another. The representatives for the county, in the Scottish Parliament, since the revolution, were, John Caldwell of Caldwell; William Cunningham of Craigends; Sir John Maxwell of Pollock; Sir John Houston of Houston; Alexander Porterfield of Porterfield; and Sir Robert Pollock of Upper Pollock. The members of the British Parliament since the Union, with the days for which the Parliaments were summoned to which they were elected members, are as follow:

Sir Robert Pollock of that ilk, ...	23	Oct.	1707
Sir John Schaw Bart. of Greenock,	8	July	1708
Sir Robert Pollock Bart.	25	Nov.	1710
Id.	12	Nov.	1713
Id.	17	March	1715
Major Tho.s Cochran of Craigmuir,	10	May	1722
Sir John Schaw Bart.	28	Nov.	1727
Alex. Cunningham of Craigends, .	13	June	1734
Id.	25	June	1741
Mr Cunningham died: and on	23	Dec.	1742
W.m Mure of Caldwell was elected.			
Id.	24	July	1747
Id.	29	April	1754
Patrick Crawford of Auchinames,	16	April	1761
William M'Dowall of Castlesemple,	7	April	1768
John Crawford of Auchinames, ...	24	Oct.	1774

John Shaw Stewart of Greenock,	30	Sept.	1780
William M'Dowall of Garthland,	21	May	1783
Id.	17	April	1784
John Shaw Stewart of Greenock,	19	Oct.	1786
Id.	24	July	1790
Boyd Alexander of Southbar, ...	13	June	1796
William M'Dowall of Garthland,	23	July	1802
Id.	29	Nov.	1806
Id.	29	May	1807
Mr M'Dowall died: and on	2	May	1810

Arch.[d] Speirs of Elderslie was elected.

The representatives in Parliament for Renfrew, Glasgow, Rutherglen and Dumbarton, were,

Sir John Johnstone Knight, ...	23	June	1707
Robert Rodger Esq.	8	July	1708
Tho.[s] Smith Dean of Guild, Glasgow,	25	Nov.	1710
Id.	12	Nov.	1713
Mr Smith died:			
Daniel Campbell of Shawfield elected.			
Id.	10	May	1722
Id.	28	Nov.	1727
Col. John Campbell of Croombank.	13	June	1734
Neil Buchanan Esq.	25	June	1741
L. Col. John Campbell of Mamore,	13	Aug.	1747
Id.	31	May	1754
Lord Frederick Campbell, ...	19	May	1761
Id.	10	May	1768
Id.	29	Nov.	1774
John Crawford Esq. of Auchinames, Chamberlain of Fife, ...	31	Oct.	1780

Ilay Campbell Esq.	18	May	1784
appoint.d L. Pres. of the court of Ses.			
Jo. Crawford of Auchinames elected.			
William M'Dowall Esq. of Garthland,	25	Nov.	1790
Id.	27	Sep.	1796
Boyd Alexander Esq. of Southbar, .	16	Nov.	1802
Arch.d Campbell Esq. of Blythswood,	15	Dec.	1806
Id.	22	June	1807
Alex. Houston Esq. of Clerkington,			1809

SECTION II.—DIVISIONS AND SURFACE.

The small extent of Renfrewshire supersedes the necessity of any political sub-divisions: but in considering this county in an agricultural view we are naturally led to throw it into three separate districts: the *hilly*, or more elevated; the *gently rising;* and the *flat.* These three differ greatly in soil, surface, and mode of cultivation.

1. The *hilly* or more elevated district contains 80,772 Scots acres,[a] it is by far the most extensive, and, if properly cultivated, perhaps the most important of the three. This tract forms the south and west parts of the county: it extends a considerable way into the neighbouring shires; and in Renfrewshire comprehends the entire parishes of Mearns, Eaglesham, Kilmalcolm, Innerkip, Greenock, Port-Glasgow, the greatest part of Neilston,

a Equal to 101,540 English acres.

and Lochwinnoch, with large portions of other parishes, which are chiefly situated in the lower districts. Though the whole of this district be considerably elevated above the level of the sea, yet it has no very great inequality of surface. A great portion of it forms what is called a *table land;* as having no rugged or lofty mountains incapable of improvement by cultivation or planting, and few steep ascents, except in some places where the higher region is connected with the lower grounds, or where a stream of water has worn for itself a deep channel. The most elevated parts in this district are the hills in the south east, and western extremities. Mistylaw, in the parish of Lochwinnoch, is the highest hill on the west; and Balagich and Dunwar in the parish of Eaglesham, are the highest hills in the south-east side of the county; the first is said to be 1240 feet;[a] the two last are about 1000 feet[b] above the level of the sea. On the south side of the county the hills are far from being so elevated. Stanely braes in the parish of Paisley, are computed to be 680 feet,[c] and Neilston-pad 820 feet[d] above the level of the sea. The medium elevation of this division of the county, may be reckoned from 500 to 600 feet.

2. The *gently rising* or middle district contains 32,280 Scots acres;[e] and comprehends the parishes

a See Statistical account of Scotland, vol. xv. p. 66.
b See Stat. account, vol. ii. p. 124.
c See Stat. account, vol. vii.
d See Stat. account, vol. ii. p. 143.
e Equal to 40,580 English acres.

of Cathcart, and Eastwood, with parts of the parishes of Paisley, Inchinnan, Erskine, Houston, Kilbarchan and Renfrew. In no part of Britain, perhaps, has nature formed a more beautiful surface of ground, than in this district of Renfrewshire. Little hills gently swelling in endless variety, interspersed with various coloured copses, often watered at the bottom by winding rivulets, in different and changing forms, meet every turning of the eye: and few inland views, perhaps, in richness and variety, surpass those which present themselves from the top of every one of those gentle eminences which are so beautifully scattered round the town of Paisley. In a small compass, there is a wonderful diversity of landscape. "The hills do not rise in ridges, but are altogether "separate and distinct from each other, and present "those alternate risings and falls, which constitute "so material a part of picturesque beauty."[a]

3. The *flat*, or, in the language of the county, the *Laighlands*, which forms the last and smallest district of the county, consists chiefly of that beautiful level tract, which is situated to the north of the town of Paisley; and comprehends the parish of Renfrew, and parts of Inchinnan, Erskine, Houston, Kilbarchan and Paisley. It lies chiefly near the confluence of the rivers White-Cart, Black-Cart, and Gryfe; and from it the ancient name of this tract, *Strath-Gryfe*, is derived. The length of this plain is about six miles, its breadth

a See Statistical account, vol. v. p. 338.

about three, and its area 9,594 Scots, or 12,062 English acres.

SECTION III.—CLIMATE.

The air, it is generally believed, is moister, and the rains more frequent, in this and the other western shires, than in the eastern parts of Scotland. The prevailing wind is the south-west. This circumstance, with the vicinity of the Atlantic, and the height of the hills in the more elevated parts of Renfrewshire, sufficiently accounts for the frequency of the rains, and the difference between the eastern and western coasts. But frequent as rains are in this county, the quantity which falls is far less than in some parts of Lancashire, Cumberland and Westmoreland. The annual average of rain which has fallen at Glasgow, near the eastern extremity of this county, for thirty years, from 1761 to 1790 inclusive, is 29.65 inches. The greatest quantity in any year, during that period, was in the year 1775, which was 43.9 inches; and the least quantity was in the year 1788, which was 19.43 inches.[a] It is probable a greater quantity of rain falls in the western extremity of the county: but it is only of late that any accurate registers have been kept which might determine this. The following is a compara-

a Naismith's account of Clydesdale, p. 18. Statistical account of Scotland, vol. v. p. 332.

tive view of the quantity of rain which fell in 1809 and 1810, on a line extending almost quite across the island, and which may be considered accurate.

1809.	*Dalkeith.*	*Bothwell Castle.*	*M'Farlane Observatory, Glasgow.*	*Brisbane Observatory, Largs.**
January,	2.085	1.560	1.435	2.121
February,	3.204	2 865	2.820	4.692
March,	0.694	0.339	0.360	2.981
April,	1.240	0.785	0.386	1.751
May,	2.076	2.935	2 379	2.806
June,	2.525	1.846	2 379	2.956
July,	2.324	1.545	2.245	1.829
August,	6.502	4.470	5.283	6.298
September,	3.476	2.780	2.325	2.025
October,	0.406	0.950	1.442	2.220
November,	1.445	1.175	0 925	2.410
December,	2.575	3.190	3.153	6.535
Total,	28.552	24.440	25.132	38 624
1810.				
January,	2.280	1.770	1.743	3.740
February,	0.984	1.455	1.283	3.191
March,	2.843	2.467	1.687	4.051
April,	1.584	0 768	0.659	3.170
May,	1.435	0 707	0.510	0.732
June,	1.479	1.962	1.145	1.781
July,	3.134	3 640	3.724	3.100
August,	3.100	2.410	2 874	3.244
September,	0.457	0.620	0.724	1.804
October,	1.570	1 807	1.176	2.399
November,	4.430	3.334	3.374	4 859
December,	2.340	4.070	2.534	6.643
Total,	25.636	25.010	21.433	38.714

* Largs, a village in Ayrshire, situated upon the frith of Clyde, near the western extremity of the county of Renfrew.

Although it thus appears that the quantity of rain in the west of Renfrewshire is considerable, it is certainly far short of that which falls annually at Lancaster, Manchester, Kendal [a] and Keswick,[b] which is 40.3, 43.1, 61.2, 70.6 inches respectively. The quantity of rain is not so much to be dreaded as its frequency.

The vicissitudes of weather are not more remarkable in this than in many other counties of Scotland. A long period of dry weather frequently takes place, and this again is often succeeded by an equal period of rain. In Renfrewshire itself a difference of climate exists. In the lower divisions of the county the spring is early; and the operations of seed-time are considerably advanced, while the grounds in the higher district are bound by severe frost. In the former too, the harvest is earlier and far less precarious than in the latter, where the inconvenience of a foggy and moist atmosphere is experienced. But in hoar frosty weather the frost seems to descend from the mountains, and while they enjoy a bright sunshine and a serene atmosphere, the lower parts of the county are sunk, as it were, in an ocean of fog. The climate upon the whole is healthy; and even in the division of the county, last described, though flat, of considerable extent, and much intersected by rivers, *agues* are unknown.

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a Thomson's Chemistry, vol. iii.

b Agricultural account of Cumberland, p. 199.

SECTION IV.—SOIL.

The county exhibits not only a varied surface but also a great diversity of soil. That which most generally pervades the more elevated division of the county, is a free light earth, on a dry bottom of gravel, or whinstone, or what is called rotten rock; which readily absorbs water, and preserves the surface at all times free from a superfluity of moisture. In the middle or gently rising district, the soil is a thin earth, sometimes on a gravely, but generally on what is called a *till* bottom; the *till* being a mixture of stones and heavy clay, hard, and retentive of moisture. In this district are also to be found many flat holms of small extent, the soil of which is of a loamy mellow nature, and of very great fertility. There is little land in this division which is not arable.

In the flat division, the soil is generally a deep rich loam, of a dark brown colour, and seems to be a deposition of vegetable mould from the higher and less fertile parts of the county. Much of it is of the nature of what is termed *carse clay;* and in some portions, such as the burgh lands of Renfrew, the subsoil is sandy. While these are the prevailing soils in the different divisions of the county, it will easily be conceived, that in districts of such extent, there must be a considerable variety and different degrees of fertility. In the hilly or first division, the grounds are often very barren, producing mere ling or

heath; and many parts are covered with deep moss. In the lower district, especially along the banks of the Black-Cart,[a] moss also prevails; less difference probably exists in the middle district; and in this last division no moss occurs.

SECTION V.—MINERALS.

The minerals of which Renfrewshire is possessed deserve particular notice. The discoveries that have been already made below the surface have augmented the wealth of the county, added to the comfort and convenience of its inhabitants, and enabled them to carry on many manufactures, which have not yet found their way into other parts of the kingdom; and it is probable that farther mineral treasures remain unexplored. Neither the highest nor lowest divisions of the county afford a wide field for mineralogical inquiry. The first division abounds with whinstone, or mountain rock, where very little stratified matter is to be found. The coal, lime and freestone, at Ouplay, in the parish of Neilston, are situated in this division of the shire, and probably form the only exception to this general observation. At the same time it may be remarked, that the extent of these strata is narrow,

a There are four mosses in this lowest division, called Blackstoun, Paisley, Dargeval, and Barrochan moss; containing in all about 1550 Scots, or 1970 English acres.

that they are often interrupted and irregular, and in a valley of so moderate an elevation compared with the neighbouring hills, that they may be considered as belonging to the middle division. Some fissures of rhomboidal calcareous spar, have been discovered in the parish of Kilmalcolm; but in this higher region there is yet no substance found which assumes a regular bed.

In the flat division of the county the strata are situated far below the surface, and deeply covered with moss, earth, clay, sand and gravel; and the discoveries of minerals, in consequence of a few searches, have hitherto presented but unpromising appearances. Several attempts have been made for coal and lime in Renfrew moor, belonging to the burgh of Renfrew, (a part of this division) within the last sixty years, at considerable expence; and though the last atempt has laid open both coal and lime, there is reason to conclude, that no good *workable* field exists in that part of the county. The difficulties attending the working of the limestone are considerable; and the magistrates of Renfrew, apprehend the success of the undertaking so very doubtful, that they have let this coal and lime, under long lease, at only £1, or £2, per annum. It is the middle, or gently rising, division, that affords the most intersting subject for a mineral survey; and to that part of the county we shall here confine our observations.

Coal.—" All the subjects of useful industry, all " the arts and manufactures, without exception,

"depend, directly or indirectly, on operations in "which fire is necessary." [a] An examination of the coal strata *in this county*, where manufactures are carried on extensively, must, therefore, be of much importance.

There are generally about twelve different coal works carried on in the county. They are chiefly situated in the parishes of Eastwood, Cathcart, part of Govan, and Paisley.

In the first two parishes, several seams have been discovered, which are at present wrought. Some of them afford coal of very excellent quality; such as at Nutshill, where the specific gravity of the coal of some of the seams is only 1.252: but as from the thinness of the strata, these works are unfit to supply a great demand, they are neither productive to the proprietors, nor beneficial to the public. In the lands of Cowglen, in the parish of Eastwood, where the greatest number of those thin seams of coal is found, the strata that occur are as follow:

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a Count Rumford's Essays.

Fathoms.		*Thickness.* *Ft.*	*In.*
6	From the surface there is		
	1st, Splint coal, ...	1	6
1	below the Splint coal there is ..		
	2d, Soft or Sclaty coal, ...	2	0
2	below the Sclaty coal there is		
	3d, Smithy coal, ...	1	3
3	below the Smithy coal there is		
	4th, Rough Splint with a pooling below of Smithy coal,	2	3
1½	below the Rough Splint there is		
	5th, Soft coal, ...	2	2
13½		9	2

And below these there are several thin seams which have not been wrought, but have been discovered at the crop. The intermediate strata between these different coals, are freestone, blaes, and ironstone. Some of the coal-works in the parish of Paisley,[a] are also unproductive on account of the extreme thinness of the strata. The most extensive and valuable coal-works in the county are the three following:

Polmadie Coal.—The very valuable field of coal which runs in the course of Clyde from the parishes of Shotts and Dalserf to Glasgow, a stretch of above twenty miles in length, and of various breadth, and

a Nutshill, Wardhill, &c.

which is known to contain six or seven workable seams of coal, extends into the lands of Polmadie, Howbank, Corsehill, and other parts of the eastern extremities of Renfrewshire. The coal on each side of the Clyde with their intermediate strata, which are chiefly freestone, blaes and ironstone, is found to dip towards the river. The upper seam, at the depth of 40 fathoms from the surface, is the only one that is yet wrought on the lands of Polmadie. From an examination, however, of the contiguous pits in Lanarkshire, the following may be assumed as a correct journal of the different seams of coal which occur in the eastern corner of Renfrewshire, and of their distances from each other.

Fathoms.		*Thickness.*	
		Ft.	*In.*
40	From the surface to the 1st workable coal called ...		
	1st, The Upper coal, is ...	4	6
5	below the Upper coal there is a Tender coal not worked,	2	0
6½	below the Tender coal there is 2d, The Ell coal, ...	3	9
5½	below the Ell coal is ..... 3d, The Main coal, ...	4	10
10½	below the Main coal is ..... 4th, The Humph coal, ...	3	0
67½	*Carried forward,*	18	1

Fathoms.		*Thickness.*	
		Ft.	*In.*
67½	*Brought forward,*	18	1
9	below the Humph coal is		
	5th, The Splint Ell coal, .	3	10
1	below the Splint Ell coal is ..		
	6th, The Splint Main coal,	7	6
13	below the Splint Main coal is		
	7th, The Sourmilk coal, .	2	6
90½		31	11
5½	*Coal.*		
95½	*Total depth.*		

Hawkhead or Hurlet coal.—The Hawkhead or Hurlet coal, is situated in the parish, and lies three miles south-east from the town, of Paisley. It is a stratum 5 feet 3 inches thick, declining eastward, with a dip which is variable, but may, on an average, be accounted one in eight. This seam extends over several hundred acres of land, and has been wrought for at least three hundred years. From a lease dated in 1634, granted by James Lord Ross, it appears, that there were then five miners employed; that the annual sales of coal amounted to £200; and that the rent to the proprietor, was 1400 merks Scots, equal to £77 15 6⅔ sterling. There are at present from twenty to thirty miners employed. The strata that were intersected in sinking a pit in 1786, on the west side of the rivulet of Levern, were as follow:

	Ft.	In.
1. Earth and clay,	42	0
2. Sand and gravel,	8	0
3. Schistus, or till; with some thin strata of limestone, and many beds of ironstone, and balls of ironstone,	105	0
4. Limestone,	3	0
5. Schistus of an aluminous quality,	3	1
6. Coal; the specific gravity of which is 1.266,	5	3
Total depth,	166	4

The same seams of coal and limestone have been discovered in the estate of Househill, on the east side of Levern, at the depth of 240 feet from the surface; and the strata intersected are, in all respects, similar to those on the west side of that stream, excepting for about 90 feet next the surface, which appears to be new strata of limestone and ironstone, and, in some places, strata of landstone.

Quarreltoun coal.—At the coal of Quarreltoun, which is now working both at Quarreltoun, and in the estate of Cochran formerly the property of William M'Dowall Esq. there are several singular circumstances. The concomitant strata are chiefly whinstone; whereas at the other coal-works in the county, the accompanying minerals are freestone, ironstone, limestone, blaes, &c. but never whinstone. This coal is described in the vii. vol. of

the Statistical account of Scotland by the Rev. Mr Boog.

"The coal at Quarreltoun is one of the most "extraordinary masses of that mineral in the king-"dom. It consists in effect of five contiguous "strata. The thickness of the whole, measured at "right angles to the surface of the strata, is up-"wards of 50 feet; but as in some places the seam "forms a considerable angle with the horizon, the "thickness of the whole in those places, measured "vertically, is about 15 fathoms. In consequence "of the great depth, it is worked in floors or "storys. Till of late, the work was carried on "horizontally from the shaft, so as successively to "intersect all the five strata. At present, the miner "pursues the same stratum, rising with it. In the "former mode of working, there were five several "floors or storys; in the present, there are only "three; the first, third and fifth stratum being "wrought, and afterwards so much of the second "and fourth as may be done with safety. It is "difficult to convey a clear idea of the manner in "which this singular mass of coal lies. In a field "of about 15 acres it is found to dip in several "different directions. At least, conceiving a near-"ly circular area of these contents, the coal from "the north, the east and the south quarters of "that circle, dips pretty uniformly towards the "centre. This, however, is in some measure inter-"rupted by several hitches, at one of which the "mass of coal is suddenly thrown up about 50 feet, "at another about 30. These hitches interrupt not

"only the direction, but the degree of the dip. "On one side of the first mentioned hitch, it is "about one foot in three; on the other, only one "in six. Some years ago this coal caught fire; "and, the pillars giving way, the ground sunk, "and left the surface in a very rugged state. The "excellent judgment and persevering industry of "the proprietor (Mr Houston of Johnstone) have "surmounted many difficulties that have occurred "in working this valuable coal; it now (1792) "employs about thirty pickmen, and there are "commonly twelve or fourteen horses below "ground. The produce some years has been no "less than 20,000 tons."

Coal is now the common fuel in every part of the county: the price at present, at the pits, is from 4*s.* to 6*s.* per cart of 12 cwt. or from 6*s.* 8*d.* to 10*s.* per ton.

Limestone.—Limestone abounds in different parts of Renfrewshire, particularly in the parishes of Cathcart, Lochwinnoch and Paisley. There are commonly eight different lime quarries wrought in the county. Stanely lime quarry, in Paisley parish, is a considerable mass lying in a narrow compass, and dipping towards a centre like the Quarreltoun coal. It is wrought by mines driven from opposite sides of the circular mass of limestone, and meeting at the centre. The lime-works at Blackhall,[a] Cathcart, Corseford and Locher, were

a Cathcart and, of late, Blackhall lime-works have been abandoned.

also wrought by mining, though the first two have only a clay roof. "The Hurlet lime lies in a stra-"tum 3 feet thick incumbent on the seam of "coal.[a] After the coal is dug out the limestone "is blown down with gunpowder, about one half "being left to support the strata above." There is generally a joint, or parting, in the middle of this stratum of limestone, which renders the operation of blasting with powder easier than if the whole were one solid seam. There are generally fifteen men employed at Hurlet in blasting the limestone; ten men in breaking it and burning the lime during the summer season; and five or six horses in drawing it from the wall-face to the bottom of the shaft, whence it is raised to the surface by a common gin. The limestone at Muirhead or Newton, in the parish of Paisley, was in like manner wrought, after the coal was exhausted; and raised from the bottom to the surface by common gins; but this work is now abandoned. There are several lime-works at Darnly, in the parish of Eastwood; the lime containing so small a portion of calcareous matter, as hardly to decompose, or fall to powder, after calcination.[b] The lime at Darnly slacks best in the kiln, and is valuable as an excellent cement. The whole quantity of limestone that was burnt at the different lime-works in the county in 1795 was from 8,000 to 10,000 chalders; the chalder containing 32 Winchester

a No. 4 in the above journal of strata. Stat. account, vol. vii.

b The specific gravity of this limestone is 2.638: the specific gravity of Hurlet limestone 2.693.

bushels of lime, or 16 bushels of lime shells: and the value, at from 10*s.* to 12*s.* per chalder, is about £5,000. In consequence of the improved state of the roads, and of a more complete knowledge of agriculture, which seems to be gradually diffusing among the farmers, the consumpt of lime has increased every year, nor does it yet appear to be at its height. The quantity at present burnt and applied as manure is about 12,000 chalders, and the value at 16*s.* £9,600 sterling.

Ironstone.—It is only within the last seventeen years that any ironstone has been wrought in the county. On the banks of Cart, on the estate of Blackhall, considerable quantities[a] have been dug and conveyed, by land carriage, to Clyde iron-works in Lanarkshire, a distance of about eleven miles. The expence of working has commonly been from 4*s.* to 5*s.* per ton; the rate of carriage from 5*s.* to 7*s.* per ton, and the proprietor obtains a royalty or lordship of 10*d.* or 1*s.* per ton. The bands of ironstone at Blackhall, are numerous, of considerable thickness, and afford iron of very good quality. Besides the numerous ironstone bands, there are also a great number of ironstone balls which are wrought along with the accompanying strata.[b] At Hurlet the bands of ironstone are still

a About 1,000 or 1,200 tons per annum.

b At Hillington three bands of ironstone were also wrought for a short time, the specific gravities of which were: upper band, 3.122; middle band, 3.407; and lower band, 3.280.

more numerous and some of them nine inches thick.[a] To enumerate all the different places of the county where ironstone in the state of beds and balls is found, would be superfluous. It seems to be very universally diffused over all the district of the county we are now considering. It will be enough to observe that in many places where this division of Renfrewshire is intersected by the rivers White-Cart and Gryfe, and the rivulets Levern and Locher, immense quantities may be observed *cropping* out on the banks of those streams. The detached ironstone bands and balls[b] which are to be found as concomitant strata of almost all the coal works in the county,[c] are also worthy of notice. It is said[d] that similar detached bands and balls collected in Lanarkshire, make a considerable part of the supply of Clyde furnaces in the parish of Old Monkland, and almost the whole of the supply of Cleland furnaces in the parish of Shotts. It is therefore highly probable that a mineral which the county contains in such profusion will in some future period be held in higher estimation, prove an addition to the wealth and importance of this county, and give a new spring to the ingenuity and exertion of its inhabitants.

Pyrites.—In the stratum of coal at Hurlet and

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a The specific gravity is 3.29.

b The specific gravity of some of these balls is 3.453.

c Hurlet, Cowglen, Nurshill, Polmadie, Howbank.

d See Grieve's Report of minerals on the intended Canals from Edinburgh to Glasgow, 1793.

Househill there are found considerable quantities of pyrites. These have since the year 1753 been carefully separated from the coal at Hurlet, and sold to a company established *there*, for manufacturing sulphate of iron or green vitriol. The price of these pyrites or copperas stones, by old contract, was $2\frac{1}{2}d$ per *hutch*, of two hundred weight. A similar establishment for manufacturing copperas was begun in 1807 at the adjoining lands of Nutshill, which is supplied with pyrites from the coal-work on the lands of Househill adjoining Hurlet. The specific gravity of good pyrites is 3.658.

Aluminous Schistus.—On the banks of Gryfe and Locher, in the parish of Kilbarchan, there are evident indications of an aluminous schistus resembling the rock or *mine* [a] from which alum is manufactured at Whitby in Yorkshire; but no experiments have yet been made to determine how far this substance is fit for preparing alum.

The seam of schistus situated between the lime and coal at Hurlet (NO. 5 in the above statement of strata) [b] is very variable in thickness, being sometimes only six inches, and in several instances $3\frac{1}{2}$ feet. Its specific gravity is 2.404; and, though extremely hard when fresh dug, it decomposes by the action of the air. The extent of excavation or *waste*, in these mines, is about $1\frac{1}{2}$ mile in length, and the greatest breadth about $\frac{3}{4}$ of a mile; the whole of the

a *Mine*, a provincial term at Whitby for schistus or alum rock.
b See page 20.

cavity is in general dry, and the temperature from 60° to 63°. In this situation the schistus gradually decomposes, and acquires a flaky or downy appearance. In some places, where the schistus may have lain for a very long period, the decomposition is complete. When thus completely decomposed, it is a beautiful vitriolic effloresence resembling plume alum, but seems to be rather a sulphate of iron than of alumine. It appears in many instances to contain nearly equal quantities of each. The separation of the former, with a view to manufacture alum, was always found difficult. Many unsuccessful attempts to prepare alum from this material were made in 1768 and 1785: but from experiments made in 1795 and 1796 it appeared, that by proper application of the principles of chemistry, this separation might be effected. In consequence of the success of these experiments, a work for the manufacture of alum was begun at Hurlet in 1797, by Macintosh, Knox & Co.; and in 1808 similar works, on a larger scale, were established by the same company, at Campsie in Stirlingshire, where the same mineral substances are in great abundance.

Dr James Millar of Edinburgh, in the appendix to his edition of Williams' History of the mineral kingdom, has given some account of the mines at Quarreltoun and Hurlet,[a] and of the productions of the latter. He assumes, that in consequence of gradual decomposition, the schistus is "*converted*

a Vol. ii. pages 315, 319.

into a native alum:" but this is erroneous. In tracing the circumstances which have produced the changes on the materials found in these mines, he observes: " The pyrites of the coal is decomposed, " and the sulphur being oxygenated, is converted " into sulphuric acid, part of which combines with " the oxide of iron, and thus forms sulphate of iron, " or copperas; while another part of the sulphuric " acid combines with the alumina of the schistus, " and probably also with an alkali, thus yielding a " *native alum.*" But no such combination with amonia or with an alkaline can take place, for none of these substances are to be found in the mines at Hurlet, which never afford a single specimen of native alum. Native copperas however is frequently found.[a]

Freestone.—The middle division of the county abounds with freestone quarries, of excellent quality, lying near the surface. The most valuable are on the estates of Househill, Stanely, and Newton. The nearness to Paisley gives additional value to the quarries situated on the south side of that town.

Whinstone.—It has been already observed, that immense masses of whinstone are to be met with almost every where in the higher district of this county. In the other two divisions this seldom occurs. Yet detached masses are to be found at

a Farther observations on the manufacture of alum and copperas will be found in chap. xv. sect. 7.

different places in the middle division; as at Elderslie, Paisley, Blackhall, Cathcart, Craigton of Erskine, Rashielee, &c. &c. These afford excellent materials for paving streets, for making and repairing roads, and for forming the jettees which have been constructed for improving the navigation of the Clyde.

Copper.—There are some appearances of *copper ore* in sand-stone rock, on the estate of Gourock, in the parish of Innerkip. About the year 1780 some experiments were made to ascertain its quality; but it is presumed those trials were unsuccessful, as the operations at Gourock have been long discontinued.

Fossils.—A great variety of fossil substances are found in the coal mines, and in the stone and lime quarries, of this county, well deserving the examination of mineralogists. In the mines at Hurlet, besides specimens of native copperas, or sulphate of iron, and the plume alum already described, specimens of sulphate of magnesia, crystalized sulphate of lime, and native sulphur are occasionally found. On the highest parts of the county, specimens of prehnite and zeolite are frequently met with. But it is unnecessary to detail the variety of marine exuviæ, fossil shells, figured stones, bitumens, spars, &c. which are to be found in Renfrewshire; the intention of this report being to collect facts relating to the advantages which may be derived from the mines of the county, rather

than to enumerate every object connected with the mineral kingdom.

SECTION VI.—WATER.

This county is intersected, and excellently watered, by a variety of rivers and streams, which pursue their course from different quarters and in different directions. Of these the chief are, the Clyde, the White-Cart, the Black-Cart, and the Gryfe. The Clyde, though it takes not its rise in Renfrewshire, passes along a great part of its northern and western boundaries, spreading itself in a broad and deep channel as it approaches the sea; its surface crowded with vessels, and its banks adorned with green fields, elegant houses, pleasant villas and populous towns.[a]

The salmon fisheries, in this part of the river Clyde, belong to the burgh of Renfrew, and afford but a small income. About twenty years ago they yielded only about £30 per annum; in 1798 the rents rose to £168; and in 1799 to £230; but they have since remained stationary, and seldom bring £200 a-year.

The river is navigable to the city of Glasgow, and the improvement of its navigation has been long considered as an object of great importance.

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a The burgh of Renfrew, the town of Port-Glasgow, the town of Greenock, and the village of Gourock. See an account of these towns in chap. xv.

For this purpose the Lord Provost, magistrates and council of that city obtained an act of parliament,[a] by which they were impowered to commence certain operations on the 1st of May 1759. But either the plan proposed to be adopted was defective, or the powers contained in that act were insufficient for the purposes in view, so that it was not thought adviseable to take any steps towards improving the navigation, and no operations whatever were begun under that act of parliament. In 1771, the magistrates, having taken the opinion of Mr John Golburne of Chester and other eminent engineers, and got an accurate survey of the river, applied for, and obtained a new act of parliament,[b] and employed Mr Golburne to begin the proposed operations. At this period, as Mr Pennant observes,[c] and he derived his information from his friend Mr Golburne; "The city of Glasgow was "perfectly tantalized with its river: the water was "shallow, the channel much too wide for the usual "quantity of water that flowed down, and the "navigation interrupted by twelve remarkable "shoals. The second inconveniency continually "increased by the wearing away of the banks, "caused by the prevalency of the south-west winds "that blow here, and often with much violence, "during more than half the year: that what is got "in breadth, is lost in depth; and shoals are form-

a 32 Geo. II. cap. 32.
b 10. Geo. III. cap. 104.
c Pennant's Tour in Scotland, vol. ii. p. 143.

"ed by the loss of water in the more contracted "bed." The act impowered the magistrates to make and keep the river Clyde navigable from the lower end of Dumbuck-ford to the bridge of Glasgow, so as there may be at least seven feet water, at neap-tides, in every part of the river. The operations were begun immediately after passing the act, but nothing to any great extent was carried on till the years 1772 and 1773. "Before "these improvements (says Mr Pennant) lighters "of only thirty tons burden could reach the quay "of Glasgow, at present (1772) vessels of seventy "come there with perfect ease."

By an act of parliament[a] passed 20th May 1809, the magistrates are impowered not only to continue the works authorized by the two former acts, but also to carry on such new and additional works as they shall think proper, till such time as the river is at least nine feet deep, at neap-tides, in every part between the bridge of Glasgow and the castle of Dumbarton. For carrying on these works they are impowered to borrow money, not exceeding £30,000, and the rates and duties may be made over in security for payment of the money borrowed. The duties are to be applied in carrying these acts into execution, and in making and maintaining the navigation, and the quays, piers, jettees, walls, &c. The river-duty payable on all kinds of goods is very moderate. On coals it is four-pence per ton; and on bricks, lime, limestone, and pan-tyles, six-

a 49. Geo. III. cap. 74.

pence per ton; and so great has been the success in improving this navigation, and such the extent of trade and increase of revenue, which rose from £1021 to £4759,[a] that after the 8th of July 1817 both these duties are to cease and be totally extinguished. A great number of vessels are now employed at Glasgow in the coasting trade: they are from 70 to 150 tons burden: from twenty to thirty of them are constant traders to and from Dublin, Belfast, Liverpool, and Bristol; and there are instances of vessels making voyages from the quay of Glasgow to Lisbon. The means of improving the navigation have been, chiefly, dragging out the sand and gravel, and building jettees of strong mason work, of whinstone, projecting into the river in an oblique direction, so as to contract the bed of the river: these operations have been attended with most beneficial effects; they have not only improved the navigation, but have acquired for the adjoining proprietors considerable quantities of land from the river. The latest improvements are dykes or walls parallel to the current of the river, and these will still farther benefit the navigation, and reclaim additional quantities of land.

The *White-Cart* rises in Lanarkshire and enters this county from the south, in the parish of Eaglesham. Thence, for a few miles, it flows northeast: reaching the castle of Cathcart, it turns northwest, passes through the parish of Eastwood, enters

a The first tonnage dues for the year 1771 were £1021 5 1, for 1791 £2144 16, for 1792 £2400, for 1793 £3205, and for 1804 £4759 10 4. See Denholm's History of Glasgow, p. 322.

the parish of Paisley near the castle of Cruikstoun, and directs its course northward through the town of Paisley till it meets, at the bridge of Inchinnan, the united rivers of Gryfe and Black-Cart, and mingling its streams with theirs, joins the Clyde about 6¼ miles below Glasgow. The navigation of the White-Cart was considerably improved, though at a great expense, in the year 1786, when the bed of the river was deepened below the town of Paisley, and the navigation completed to the Clyde by a short navigable cut, which, leaving the Cart a little above Inchinnan bridge, passed by the east end of that bridge, and so avoided the shallows which are under the arches, and which it was not thought adviseable to attempt to deepen. Mr Crawford in his history of the county says, "In "the river White-Cart, a little above the town of "Paisley, there are found pearls so fine and big, "that they may compare with many oriental, and "have been taken notice of by some of the most "famous jewellers in Europe. They are found in "the ground of the river, among the sand, in a shell "bigger than that of a muscle:[a] the proper season "of fishing them is in the summer." These valuable pearls are, however, no longer to be found.

The river *Black-Cart* rises from Lochwinnoch, or Castlesemple-loch, in the south-west extremity of the county. From this it runs for some miles

a This bivalvular shell-fish is sometimes found in Clyde near Hamilton, and is known by the name of the *horse muscle;* small pearls are found in some of them; but so rarely, that they are scarcely thought worth the fishing for. See Statistical account, vol. ii.

north-east, when it passes through several mosses, from which acquiring a dark tinge, it has obtained the epithet of *black;* it joins the Gryfe at Walkinshaw, about two miles above the confluence of that river with the White-Cart. Its run is about seven miles.

The *Gryfe* rises in the western parts of the county among the high lands of the parish of Greenock: it runs eastward through the parishes of Kilmalcolm, Houston, and Kilbarchan; and having received the Black-Cart at Walkinshaw, and the White-Cart at Inchinnan, these united rivers flow from thence three quarters of a mile, and empty themselves into the Clyde. The whole run of Gryfe is about seventeen miles.

Besides these there are a great many rivulets and smaller streams, called, in this part of the country, *waters;* the principal of which are Levern, Brock, Calder, Locher, Duchal and Alt-Patrick. All these, independent of their importance to agriculture, are, in almost every part of their course, applied, by the busy and ingenious inhabitants of the county, to the various purposes of manufactures. The county also enjoys considerable advantages from the lochs (or lakes) which are situated at, or near, the sources of the streams now mentioned. Several of those lakes, originally of considerable extent, have been of late greatly enlarged, and converted into reservoirs for supplying the machinery, upon the rivulets which issue from them, during the dry part of the season. It has been ascertained, that, since the forming of those reservoirs the river

White-Cart has never risen so high, in consequence of heavy rains, as it had formerly done. They collect the water falling on extensive tracts of hill ground, and, as they have never yet been filled, the water is gradually discharged; thus the lower grounds are less subject to be overflowed, which prior to the construction of those reservoirs, they frequently were, and to a very great extent. The most important of those lochs are, Castlesemple-loch containing 193 acres, Queenside-loch, Long-loch, Loch-Libo, Cauplaw-loch, Black-loch, Brother-loch, and Binnan-loch, in Mearns, Eaglesham, Lochwinnoch, and Neilston. Some of them contain pike, perch, and eel, and are visited by swans, wild-duck, teal, and other aquatic birds; others contain trout of a peculiar kind, similar to the char of the lakes of Cumberland and Westmoreland.

CHAPTER II.

STATE OF PROPERTY.

SECTION I.—ESTATES.

THE valuation of the county, as it stands in the cess books, is £69,172 1*s*. Scots;[a] and the real rent of the landed property in 1795, as collected from the Statistical account of Scotland,[b] and communications with the clergy, was very nearly £67,000 per annum, as appears by the annexed statement, which exhibits also a view of the present rental now augmented to about £126,000.

a About the fifty-sixth part of the whole valuation of Scotland.

b See Statistical account, vol. i, ii, iii, iv, v, vii, viii, ix, xiv, xv, xvii, and xviii.

Rental of the shire of Renfrew.

Parishes.	Scots acres.	Valuation Scots.			Rent St. 1795.	Rent Ster. 1810.
		£.	s.	d.	£.	£.
Town of Paisley, ...	12,848	1 077	6	8	500	1,000
Abbey of Paisley, ...		10.741	13	4	9.700	23,000
Greenock, ...	5,065	2,285	15	4	3,500	10.000
Port-Glasgow, ...	671	316	13	4	200	1,000
Kilmalcolm, ...	15,758	5,500	0	0	3,400	5,000
Houston and Killallan, ...	5.996	4,057	8	0	2,750	5 500
Erskine, ...	5,065	4,451	0	0	2,980	6,000
Inchinnan, ...	2,447	2,398	13	4	2,100	4,500
Renfrew, ...	3,008	2,776	6	8	3,150	6,000
Innerkip, ...	9,886	3,177	0	0	2,960	4,000
Mearns, ...	8,756	4,766	19	8	5,000	7,500
Eaglesham, ...	12,288	3,073	6	8	2,700	7,000
Neilston, ...	9,958	4,823	6	8	4,210	6,000
Dunlop, part of, ...	722	500	0	0	400	600
Beith, part of, ...	427	163	6	8	250	400
Cathcart, greatest pt. of,	2,782	2,242	11	0	2,190	7,000
Govan, small part of, ...		344	5	0	500	1,000
Lochwinnoch, ...	15,288	6,831	6	8	7,600	9,000
Kilbarchan, ...	7,330	6,278	8	8	4,710	8,000
Eastwood, ...	4,336	3,366	13	4	3,400	5,000
	122,626	69,172	1	0	62,200	117,500
To these sums may be added the rent of gardens at Paisley, Greenock, and Port-Glasgow; fisheries, mines, quarries, ferries, mills and lochs or reservoirs,					4,800	8,500
					67,000	126,000

This rental was then, (in 1795) and still is, divided among a great number of proprietors, from the small feuar, to the possessor of an extensive estate. The following will be found to be a tolerably exact statement of the division of property in 1795.

From £100 to £200 per annum, ...	24
£200 to £300	12
£300 to £500	13
£500 to £1.000	10
£1.000 to £2,000	7
£2,000 to £3,000	3
£3,000 to £6,000	5
	74

The remainder was shared among proprietors possessing under £100 per annum. Seven of the above proprietors were peers, only two or three of whom resided occasionally in the county; and thirty-three were freeholders. It is almost impossible, and, in a work of this kind, by no means necessary, to enumerate the landholders, or to detail the various changes of property: the noble families, however, who have held estates in Renfrewshire for the last century, it may not be improper to mention. Until the *middle* of that century the Dukes of Hamilton, Montrose, and Douglas; the Earl of Dundonald, and Lord Ross, were proprietors of extensive estates in this county; and the Earl of Glencairn, and Lord Sempill, enjoyed very consi-

derable properties in it, till the *end* of the century. New owners have, either by purchase or inheritance, succeeded to the estates of all those noblemen. In the year 1754, the Duke of Hamilton sold his estates in the parishes of Paisley, Neilston, and Lochwinnoch, in a variety of lots, retaining only the superiority. In 1756, the Duke of Montrose sold the ancient estate and regality of Darnly to Sir John Maxwell of Pollock; to whose old paternal inheritance it forms a valuable addition. In 1764, the Earl of Abercorn re-purchased, from the Earl of Dundonald, his ancient estate and Lordship of Paisley: and, at the close of the century, Lord Sempill sold his property in Inchinnan, Erskine, and Kilbarchan, in separate divisions. The Duke of Douglas's property is now inherited by his nephew Lord Douglas. The Earl of Glasgow, as heir of entail to his grand-father Lord Rosse, is proprietor of the ancient estate of Hawkhead. Mr Cunningham Graham of Gartmore enjoys the estate of Finlayston as heir of entail to the Earl of Glencairn. Lord Cathcart, at the beginning of the present century, purchased the old castle of Cathcart, the ancient property of his fore-fathers; and a small estate round that venerable ruin. The estates of Sir Michael Stewart of Blackhall, and of Sir John Shaw of Greenock, are united in the person of Sir John Shaw Stewart: and Lady Crawford Pollock is now proprietor of Sir Robert Pollock's estate of Over-Pollock.

Property of late has undergone considerable changes in this county. The largest, or most valu-

able, estate in the shire, was all purchased, within the last forty years, by the present proprietor's father, a gentleman who, by liberal and extensive mercantile pursuits, acquired estates in the counties of Renfrew and Stirling, now worth at least £12,000 per annum. Upon the whole, within the period now mentioned, there may have been landed property to the value of about a million sterling transferred in this small county; and very valuable property of that description is at present for sale.

The largest estates are commonly managed by factors residing on the spot, or in the neighbouring great towns.

The valued rent of the county, as has been already stated, is £69,172 1*s*. This, exclusive of small properties occupied by feuars, chiefly as gardens, is at present (1810) divided among three hundred and fifty proprietors; seven of whom are noblemen, and thirty upon the roll of freeholders. The following arrangement of the various estates into classes will convey a tolerably exact idea of the manner in which property is at present held: the estates held by peers or freeholders being respectively marked by the letters P or F.

CLASS I.

Estates of upwards of £2,000 Scots of valuation.

	£.	s.	d.	
1	6,231	11	6	F
2	5,141	14	5	F
3	4 293	9	4	F
4	3,599	13	4	P
5	2,917	13	4	P
6	2,829	3	8	P
	25,013	5	7	

Three of these estates, as appears from the table, belong to peers, the other three to commoners holding their lands of the crown, and standing on the roll of freeholders.

CLASS II.

Estates from £1,000 to £2,000 Scots of valuation.

	£.	s.	d.	
1	1,970	13	4	F
2	1,817	6	8	
3	1,650	0	0	F
4	1,580	0	9	F
5	1,551	19	4	
6	1,508	6	8	P
7	1,383	12	0	F
8	1,238	6	8	P
9	1,149	14	4	F
10	1,077	6	8	
11	1,043	15	10	F
12	1,000	0	0	F
	16,971	2	3	

Two of these estates belong to peers, one to a minor, one to an heiress holding of the crown, one to an extensive proprietor holding of subjects superior, and one to the burgh of Paisley. Seven of the proprietors stand on the roll of freeholders.

CLASS III.

Estates from £400 to £1,000 Scots of valuation.

	£.	s.	d.	
1	995	10	10	
2	983	6	8	P
3	940	0	0	F
4	859	10	4	F
5	760	0	0	F
6	685	16	0	
7	657	13	4	F
8	600	0	0	F
9	578	0	0	F
10	529	6	8	F
11	440	0	0	
12	410	0	0	
13	400	0	0	F
14	400	0	0	F
	9,239	3	10	

One of these estates belongs to a peer, nine to freeholders, one to parliamentary trustees, one to a minor, one to an heiress holding of the crown, and one holds of a subject superior.

CLASS IV.

Estates from £200 to £400 Scots of valuation.

	£.	s.	d.	
1	376	0	3	
2	294	2	1	F
3	286	13	4	
4	272	3	4	
5	267	0	2	F
6	266	13	4	F
7	265	0	0	
8	265	0	0	
9	260	0	0	F
10	257	10	8	
11	250	0	0	
12	244	0	0	F
13	240	12	4	
14	206	10	0	
	3,751	5	6	

Five of these estates are freehold and the owners enrolled accordingly, one holding of the crown belongs to an heiress, and the remaining eight hold of subjects.

CLASS V.

Estates from £100 to £200 Scots of valuation.

	£.	s.	d.				£.	s.	d.	
1	185	0	0	F			2,805	0	4	
2	182	6	8	F		19	129	13	6	
3	176	0	0			20	129	2	0	
4	167	16	8			21	120	0	0	
5	166	13	4			22	118	0	0	
6	160	8	8	F		23	115	19	8	
7	160	0	0			24	112	17	8	
8	157	6	8			25	111	0	0	
9	157	6	8			26	110	0	0	
10	157	3	2			27	109	18	0	
11	151	0	0			28	108	0	0	
12	150	3	8			29	105	6	8	
13	145	9	0			30	103	6	8	
14	142	10	10			31	102	10	0	
15	140	16	8			32	102	5	0	
16	139	0	0			33	100	15	9	
17	134	13	4	F		34	100	0	0	
18	131	5	0			35	100	0	0	
	2,805	0	4				4,683	15	3	

Four of these estates hold of the crown and the owners are upon the roll of freeholders, one belongs to the royal burgh of Renfrew, and thirty hold of subjects.

CLASS VI.

Small properties from £50 to £100 Scots of val.

	£.	s.	d.				£.	s.	d.	
1	99	16	8				2,146	8	8	
2	99	1	4			29	60	13	4	
3	95	6	8			30	58	13	4	
4	94	0	0			31	58	0	0	
5	91	0	0			32	57	15	6	
6	86	13	4			33	57	13	4	
7	85	6	8			34	57	3	4	
8	83	6	8			35	56	3	4	
9	81	2	3			36	55	0	0	
10	77	0	0			37	54	0	0	
11	75	5	0			38	54	0	0	
12	75	0	0			39	53	13	4	
13	75	0	0	P		40	53	12	6	
14	73	6	8			41	52	13	4	
15	73	6	8			42	52	6	8	
16	73	6	8			43	52	0	0	
17	72	0	0			44	52	0	0	
18	72	0	0			45	52	0	0	
19	71	5	0			46	51	6	8	
20	69	13	4	F		47	50	13	4	
21	67	15	7			48	50	0	0	
22	67	6	8			49	50	0	0	
23	66	13	4			50	50	0	0	
24	66	13	4			51	50	0	0	
25	64	6	8			52	50	0	0	
26	64	0	0			53	50	0	0	
27	63	9	6			54	50	0	0	
28	63	6	8							
							3,535	16	8	
	2,146	8	8							

Of these one small estate belongs to a peer, and only one is freehold.

CLASS VII.

Small properties from £34 to £50 Scots of val.

	£.	s.	d.			£.	s.	d.
1	47	6	8			1,096	9	6
2	46	13	4		26	40	0	0
3	46	13	4		27	40	0	0
4	46	10	0		28	40	0	0
5	46	5	4		29	40	0	0
6	45	14	8		30	40	0	0
7	45	6	8		31	40	0	0
8	45	0	0		32	40	0	0
9	45	0	0		33	39	0	0
10	45	0	0		34	38	13	4
11	43	15	0		35	37	19	8
12	43	13	4		36	37	0	0
13	43	13	4		37	36	17	0
14	43	6	8		38	36	13	4
15	43	0	0		39	36	13	4
16	43	0	0		40	36	6	8
17	43	0	0		41	36	0	0
18	42	17	4		42	36	0	0
19	42	17	2		43	35	6	8
20	42	13	4		44	35	6	8
21	42	0	0		45	35	0	8
22	41	16	8		46	34	13	4
23	41	6	8		47	34	0	0
24	40	0	0		48	34	0	0
25	40	0	0		49	34	0	0
	1,096	9	6			1,990	0	2

CLASS VIII.

Small properties from £26 to £34 Scots of val.

	£.	s.	d.			£.	s.	d.
1	33	15	0			811	0	8
2	33	15	0		26	30	0	0
3	33	6	8		27	30	0	0
4	33	6	8		28	29	12	0
5	33	6	8		29	29	7	0
6	33	6	8		30	29	6	8
7	33	6	8		31	29	3	4
8	33	6	8		32	29	3	4
9	33	6	8		33	29	3	4
10	33	6	8		34	29	2	0
11	33	6	8		35	28	17	10
12	33	6	8		36	28	0	0
13	33	6	8		37	27	13	8
14	33	6	8		38	27	13	4
15	33	3	8		39	27	13	4
16	33	0	0		40	27	10	0
17	32	13	4		41	27	6	8
18	32	7	0		42	27	0	0
19	32	0	0		43	27	0	0
20	30	6	8		44	26	13	4
21	30	0	0		45	26	13	4
22	30	0	0		46	26	13	4
23	30	0	0		47	26	13	4
24	30	0	0		48	26	13	4
25	30	0	0		49	26	13	4
	811	0	8			1,484	13	2

CLASS IX.

Small properties from £17 to £26 Scots of val.

	£.	s.	d.			£.	s.	d.
1	26	0	0			686	15	2
2	26	0	0		29	22	10	0
3	26	0	0		30	22	4	6
4	26	0	0		31	22	4	5
5	26	0	0		32	22	0	0
6	25	14	4		33	22	0	0
7	25	9	10		34	21	16	8
8	25	6	8		35	20	0	0
9	25	0	0		36	20	0	0
10	25	0	0		37	20	0	0
11	25	0	0		38	20	0	0
12	25	0	0		39	20	0	0
13	25	0	0		40	20	0	0
14	25	0	0		41	20	0	0
15	25	0	0		42	20	0	0
16	24	6	8		43	20	0	0
17	24	6	8		44	20	0	0
18	24	6	8		45	19	3	4
19	24	0	0		46	19	2	4
20	23	15	0		47	18	16	8
21	23	10	0		48	18	15	0
22	23	6	8		49	18	15	0
23	23	6	8		50	18	6	0
24	23	0	0		51	18	0	0
25	22	17	0		52	18	0	0
26	22	16	4		53	17	6	8
27	22	16	4		54	17	6	8
28	22	16	4		55	17	2	8
	686	15	2			1,220	5	1

CLASS X.

Small properties from £10 to £17 Scots of val.

	£.	s.	d.				£.	s.	d.	
1	16	13	4				492	11	11	
2	16	13	4			33	13	6	8	
3	16	13	4			34	13	6	8	
4	16	13	4			35	13	0	0	
5	16	13	4			36	12	10	0	
6	16	13	4			37	12	10	0	
7	16	13	4			38	12	10	0	
8	16	13	4	F		39	12	10	0	
9	16	13	4			40	12	10	0	
10	16	13	4			41	12	5	0	
11	16	13	4			42	12	0	0	
12	16	0	0			43	12	0	0	
13	16	0	0			44	12	0	0	
14	15	16	2			45	12	0	0	
15	15	8	0			46	12	0	0	
16	15	8	0			47	12	0	0	
17	15	8	0			48	11	6	8	
18	15	0	0			49	11	0	8	
19	15	0	0			50	10	13	4	
20	15	0	0			51	10	13	4	
21	15	0	0			52	10	10	0	
22	14	15	0			53	10	10	0	
23	14	15	0			54	10	9	4	
24	14	15	0			55	10	6	8	
25	14	13	4			56	10	2	0	
26	14	2	2			57	10	0	0	
27	14	0	0			58	10	0	0	
28	14	0	0			59	10	0	0	
29	13	14	5			60	10	0	0	
30	13	14	0			61	10	0	0	
31	13	9	6			62	10	0	0	
32	13	6	8							
	492	11	11				834	12	3	

From the foregoing tables the division of property stands thus:

Class. Estates.	No. of Proprietors,	where-of are, Peers.	Freeholders.	Valuation. £.	s.	d.
1 Valued at £2,000 Scots & upwards,	6	3	3	25,013	5	7
2 From £1,000 to £2,000 Scots, .	12	2	7	16,971	2	3
3 From £400 to £1,000 Scots, ...	14	1	9	9,239	3	10
4 From £200 to £400 Scots, ...	14	0	5	3,751	5	6
5 From £100 to £200 Scots, ...	35	0	4	4,683	15	3
Sum of these five classes,	81	6	28	59,658	12	5
6 From £50 to £100 Scots,.....	54	1	1	3,535	16	8
7 From £34 to £50 Scots, ...	49	0	0	1,990	0	2
8 From £26 to £34 Scots, ...	49	0	0	1,484	13	2
9 From £17 to £26 Scots, ...	55	0	0	1,220	5	1
10 From £10 to £17 Scots, ...	62	0	1	834	12	3
Sum of ten classes,	350	7	30	68,723	19	9
11 Small properties under £10 Scots of valued rent.				448	1	3
				69,172	1	0

Of the whole valuation, £13,151 10*s.* 4*d.* belongs to seven peers, one of whom, however, has only a small property in this county and some revenues from feu-duties at Greenock. The remainder belongs to commoners and to the towns of Renfrew and Paisley. There are seventy-three of these commoners who have each of them property exceeding £100, of valued rent; forty-five of whom are precluded from being enrolled as freeholders either by the smallness of their properties, minorities, or the nature of their tenures. There are seventeen estates, the valued rent of which is £30,101 0*s.* 7*d.* under the limitations of entail. Of the thirty-one [a] proprietors alluded to in the first three classes, eleven reside constantly, seven occasionally, and thirteen are absentees: and of the forty-nine proprietors alluded to in classes 4th and 5th, twelve are absentees, and thirty-seven resident. The smaller proprietors reside in the county and cultivate their own lands.

It has been already noticed [b] that important changes have taken place in the sales of landed property in Renfrewshire. In addition to what has been already stated, it may be observed, that of the eighty-one proprietors composing the first five classes, thirty-six have acquired their estates by purchase in this county within the last forty years; and that nearly one third part of the whole shire has been sold within that period.

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a Six peers, and twenty-five commoners.

b See page 41.

SECTION II.—TENURES.

The lands in this county are either freehold estates, or held in feu under a subject superior. The freehold estates in this county, with a very few exceptions, hold of the Prince of Wales, as *Prince and Steward* of Scotland; for, as Camden expresses himself, "The title *of Baron of Renfrew*, "by *a peculiar right* belongs to the Prince of Scot-"land." It was usual, particularly in the early charters of the Prince of Scotland, to design him from the particular honour in virtue of which he acted as superior of the lands in question. Thus in Carrick, the holding was of the Prince and his successors as *Earls of Carrick;* and, in Renfrewshire, the clause of holding was of his Royal Highness as *Steward* of Scotland. In a charter of the lands of Gavin and Risk in this county, granted by Robert III. as guardian of his son, in 1405, to William Boyd a predecessor of the Earl of Kilmarnock, the clause of tenure is; "To be "had and held of us and our said son and our heirs "*the Stewarts of Scotland*," because the lands granted lay in the barony of Renfrew, the ancient patrimonial inheritance of the *house of Stewart*, before they came to the throne. Whatever may have been the yearly revenue of the Prince from the barony of Renfrew in *very* ancient times, it gradually declined and consisted afterwards of mere casualities of superiority; and the tenures have for

a long period been mere *blench*-holdings, i. e. for payment of a pair of spurs, a pair of gloves, or one penny Scots if demanded only.[a]

Before the reformation, the abbeys of Scotland were possessed of very valuable estates, which in some cases were enjoyed by laymen, in virtue of perpetual feu-rights from the clergy, subject to feu-duties or rents reserved. After the reformation and the dissolution of the abbeys, a general act of annexation was passed (in 1587) annexing church lands to the crown. These lands were afterwards granted in temporal Lordships to subjects, who were termed Lords of erection. At this period Lord Claud Hamilton obtained from James VI. a charter erecting the possessions belonging to the abbey of Paisley into a temporal Lordship called the Lordship of Paisley. Of course the Marquis of Abercorn, his successor, enjoys certain *small feu-duties* from some of the lands which formerly belonged to the abbey. But the landholders who have original feus of abbey lands, are in the full enjoyment of the rights and privileges of freeholders, and are entitled to crown charters, paying the rents and casualities of the original abbey-feus to the Marquis, as Lord of erection.

Many estates of considerable value are held in feu under a subject superior, commonly for payment of a very trifling quit-rent or feu-duty, and in some instances for payment of a quantity of grain. The highest grain feu-duty is a boll per acre yearly:

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a See Casus Principis by Dr M'Leod.

but this only occurs in small properties. In the statement already given of the valuation of the different heritors of the county, it appears that there are eighty-one estates composing the first five classes, the valued rent of which extends to £59,658 12*s.* 5*d.* Scots.[a] Of this sum there is about £10,000 Scots of valuation holding of subjects superior, and all the small proprietors composing the remaining five classes, excepting one, hold their lands by the same tenure: so that nearly two sevenths of the property of the county is of this description. The superiors under whom the lands are chiefly held, are; the parliamentary trustee for the late Mr M'Dowall, the trustees for the late Duke of Hamilton, Sir John Shaw Stewart, the Earl of Glasgow, Lord Blantyre, Crawford of Auchinames, Crawford of Crawfordland, Brisbane of Brisbane, Maxwell of Williamwood, and Logan of Fingalton.

Smaller properties are held by burgage tenure chiefly under the burgh of Renfrew, and the town of Paisley. Many of those holding of the town of Paisley are by a tenure peculiarly simple called *booking*, affording a right complete without charter and sasine, which has probably arisen from the following circumstances:

It would appear, that, the occupiers of the lands of the abbey of Paisley, held their possessions by a tenure somewhat similar to that of kindly tenants, or rentallers; a mode of possession still known in some parts of Scotland, and which is recognized by

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a See p. 52.

the supreme courts[a] of the kingdom, and resembling copy-holds in England.

It was customary to insert a minute of the entry of an heir, or of the transmission of lands by conveyance, in the court books or rentals of the abbey, which were, however, made up in a formal manner at a court held for that purpose, and in presence of the sheriff of the county, the bailie of the lordship and other persons of distinction. After certain parts of the ancient lordship of Paisley were acquired by the community of Paisley from the abbot in 1490, it appears that the practice of the abbot's court was continued in the town; the names of persons acquiring, or succeeding to, property held under the town were engrossed or entered by the clerk into the court books of the burgh: hence the origin of what is called *heritable booking*.

In *transmission*, however, the feudal form is preserved; in so far as resignation by the former vassal is made in the hands of the bailies, by one of the officers of court, by the symbols of resignation in feudal tenures. This resignation is made for new and heritable *booking* in place of *infeftment* to be given to the new entering vassal, whether heir or singular successor.

This peculiarity will, from its own nature soon fall into disuetude. Not appearing in the public records of the kingdom, which is essentially necessary to the transmission of landed property, the inconvenience and insecurity of such tenures, particularly

a See Statistical account of Lochmaben, vol. vii. p. 239.

in cases of heritable debts, become obvious; and accordingly a deviation has often been adopted, by introducing a precept of sasine, which is carried into execution in the usual form; and the property must ever afterwards be transmitted, according to the ordinary style of feu-holding.

A great extent of this county, probably 50,000 acres, being held by noblemen and gentlemen under settlement of entail, it may not be improper to mention the nature of a Scottish entail. By an act of the Scottish parliament in 1685, all his Majesty's subjects are impowered to entail their lands snd estates in Scotland, with such provisions and conditions as they shall think fit; and these entails, when completed and published in the manner directed in the act, are effectual against purchasers and creditors. No after possessor of the estate can alter the destination of the original entailer, sell property, lower the rents, or contract debts, which are thus merely personal, and cannot affect the lands. Many entails in Scotland contain clauses limiting the heirs from granting tacks or leases longer than their own lives, or a few years only; and therefore the legislature, in 1770, enacted, that every proprietor, on certain conditions, may grant leases for fourteen years, and one existing life; or for two lives; or for thirty-one years; and building leases may be granted for ninety-nine years, to the extent of 5 acres to one person.

CHAPTER III.

BUILDINGS.

SECTION I.—HOUSES OF PROPRIETORS.

THERE are about thirty seats of noblemen and gentlemen in this county, besides villas belonging to merchants and traders.

A description of the seats of the nobility and gentry, at the beginning of the last century, is given by Crawford in his history of the county. Since that period, they have been generally repaired or rebuilt, in all the elegance of modern architecture, under the superintendance, or according to the plans, of eminent professional men.

There are many remains of ancient structures within this county, and many have very rapidly decayed. Crawford says, "Upon the west side "of the river Gryfe, in a plain field, on the bank "of the river Clyde, stands some considerable "remains of the old palace of Inchinnan, one of the "seats of the illustrious family of Lennox, which "hath been built by Matthew Earl of Lennox, and "Elizabeth Hamilton his Countess, daughter of "James Earl of Arran, in the year 1506." *Now* there is not a trace of this building, nor can the pre-

cise site of it be pointed out. Upon the banks of the White-Cart, in the barony of Eaglesham, there are still some vestiges of the castle of Pennoon which serve to record a memorable event. At the battle of Otterburn in 1387, Henry Percy, the renowned Hotspur, was taken prisoner by Sir Hugh Montgomery, and for his ransom he built the castle of Pennoon, belonging to the family of Montgomery now Earls of Eglinton. Near the confluence of the rivers Cart and Levern, in the parish of Paisley, there are still considerable remains of the castle of Cruikstoun, once the principal seat of the Darnly family, and for a time, no doubt, the residence of Mary Queen of Scots and Henry Lord Darnly. The castle of Cathcart stands on a commanding situation on the banks of the Cart; and near this old castle, a place is still pointed out, where Queen Mary stood and witnessed the battle of Langside. Though these are not to be compared to the extensive and splendid baronial castles of England, they are interesting as connected with memorable events in Scottish history.

The remains of Cochran, Rais, and Stanely castles in Paisley parish; of Mearns, Hag, Leven, Elestone, Caldwell and Newark, in the parishes of Mearns, Eastwood, Innerkip, Lochwinnoch, Neilston, and Port-Glasgow, are still to be seen, once the seat of powerful or respectable families, but now, with the exception of the last, little more than ruins,

SECTION II.—FARM HOUSES, OFFICES AND REPAIRS.

As the farms in the county are small, the tenants have not such extensive accommodation of farm houses or farm offices as in many other counties of the kingdom. There are, however, many good farm houses; and the latest built farm offices are, in general, well constructed. The stable and byre, or cow-house, were commonly in the same range of building with the dwelling house, and the barn detached; many of the farmers still preferring this arrangement of the buildings to any other. The neatest and best farm steadings are now generally in form of a square or court; on one side the dwelling house is situated; the opposite side being commonly left open. The houses are mostly one story high, built with stone and lime, and covered with thatch. In many instances the farm steadings are no better than the houses of cottagers, only with some additional room. But while the farms are so small, and the present habits and modes of life of many of the farmers are retained, it would be injudicious to erect farm houses in a superior style.

The expense of building may be ascertained from the following prices of tradesmen or artificers' work for 1795, compared with 1809.

Tradesmen or artificers' work.

	1795.			1809.		
	£.	s.	d.	£.	s.	d.
Mason work, including all materials, per rood of 36 square yards, ...	4	10	0	9	0	0
Roofing, including foreign timber, slates & workmanship pr rood,	10	10	0	16	16	0
Joisting and flooring, foreign timber pr square yard, ...	0	4	6	0	10	6
Windows per square foot,	0	1	2	0	1	8
Do. per do. hung,	0	2	0	0	3	0
Plaistering per square yard,	0	0	3½	0	0	5½
Ceiling lath per square yard,	0	0	9	0	1	2
Single standards and lath per square yard, ...	0	1	0	0	1	9
Partitions with standards and double lath per square yard, ...	0	1	8	0	3	3
Thatching, when straw is furnished to the workman, per square yard,	0	0	3	0	0	4½

Very few farm steadings are slated, though it would no doubt be advantageous if this were more generally the practice; much straw might be saved for manure; and the substantial state of buildings finished in this way, their neatness and cleanliness, would be sufficient inducements to it, were not slates in this county very expensive. The expense of *foreign* timber too is at all times very great in the inland part of the county, and higher than on the coasts of Ayrshire and the Forth. Taxes on building materials, such as slates, tyles, bricks, and wood, have, no doubt, augmented the price of building and artificers' work, and the present high prices of timber discourage repairs and improvements. Repairs are made by the tenant during the currency of his lease: the house and offices being commonly put in good condition at his entry, at the expense of the proprietor, or of the outgoing tenant.

SECTION III.—COTTAGES.

Many of the old cottages still remain, which have evidently been of very imperfect construction; the walls were built of unhewn stone, without mortar; the chimney was of clay and straw; and the roof turf and straw. Cottages which have been lately built for tradesmen or labourers, are of good masonry; their dimensions about 16 or 17 feet square, and covered with thatch or tyle. The expense of erect-

ing such a cottage was, in 1795, commonly from £20 to £25; but now, in 1809, it may amount to £50 or £60.

CHAPTER IV.

MODE OF OCCUPATION.

SECTION I.—SIZE OF FARMS AND CHARACTER OF FARMERS.

FEW of the proprietors occupy extensive parts of their own estates; and in general the county is let in small farms. The rents in 1795 were generally from £20 to £150 yearly; and at the present period, farms exceeding 100 acres of good arable land are but rare. Some possessors of grass grounds in 1795, held larger tracts, but their rents, at that time, very seldom exceeded £150 yearly. The extent and value of grass lands have now, however, considerably increased; and grazings in the lower part of the county from 50 to 200 acres, are now to be met with, rented for one, two, or three years, and frequently only for one summer's pasture, at £3 per acre and upwards.

Two estates in the middle division, lying contiguous to each other, rented at about £7,000, and containing about 9,000, acres were occupied in 1795, as follow:

Rents.	*Farms.*
From £5 to £20 per annum, ...	53
£20 to £40	48
£40 to £60	23
£60 to £80	15
£80 to £100	9
£100 to £120	7
£120 to £140	3
£140 to £160	2
	160

From this, the general state of the county, in the year 1795, with regard to the extent of farms, may be conceived. That they are generally too small, will appear in the sequel of this report. At present the farms are still small, few farmers, as yet, occupy more than 100 acres of good arable land; and the most extensive farms, even in the higher districts of the county, seldom exceed 400 or 500 acres. In consequence of the rise of rents, some farmers who occupy good arable lands pay £450 or £500 yearly. There are still many who occupy only to the extent of £30 or £40 per annum. The two estates above mentioned are now let at nearly double the former rents, and are occupied as follow:

	Rents.	*Farms.*
Farms from	£20 to £40 per annum, .	22
	£40 to £60	19
	£60 to £80	21
	£80 to £100	6
	£100 to £120	8
	£120 to £140	11
	£140 to £160	6
	£160 to £180	3
	£180 to £200	2
	£200 to £250	8
	£250 to £300	4
	£300 to £400	3
	£400 to £450	2
		115

There are still a number of *small* possessions under £20 yearly.

Character of the farmers.—The farmers in this county are a frugal and industrious class of men. At no very distant period, however, they appear to have been grossly ignorant of their own interest. Indolence and indigence, prejudice against new customs, and attachment to old habits, seem to have obstructed every kind of improvement. Instead of trusting to the substantial profits that might have been derived from a vigorous and diligent culture, they considered extreme parsimony and rigid economy, to be the sole means of procuring for their families the necessaries of life. They fared worse, wrought harder and enjoyed fewer comforts, than labourers

and mechanics. It must be remarked, however, that these observations are principally applicable to small tenants, who kept one or two horses, and which they wrought for hire during the greater part of the year. The smallness of their farms, (significantly described in the language of the county by the term *paffle*) and their want of capital to bring those small possessions into that complete state of improvement of which they were capable, seem to have been the causes of the depressed state of this class of men.

But the number of these small tenants is now greatly decreased; and the condition of those that remain has been improved by the increase of population, and consequent rise in the price of agricultural produce.

The possessors of larger portions of land are more affluent and independent; employ greater stock in the cultivation of their grounds; are possessed of greater sagacity; and have always successfully prosecuted better schemes of improvement.

In the upper division of the county, where they are possessed of a soil peculiarly favourable for natural grass, the best farmers very properly consider grain as an object of inferior importance, attend to the improvement of their pastures, and judiciously expect to derive their chief profits from the dairy. In the two lower divisions of the county, there are many farmers who prosecute the business with great activity. Their spirit and exertion in purchasing manure from towns, their liberal and judicious application of lime, and their industry in the busy seasons of seed-time and harvest, entitle

them to praise, and have been rewarded with as much success as could be supposed to attend the general system of husbandry which they have pursued.

SECTION II.—RENT.

It has already been observed, that Renfrewshire contains 122,646 Scots acres, and that the land rent in 1795 was about £62,200; so that about 10*s.* 2*d.* per acre was nearly the average rental of the whole county. About 18*s.* 3*d.* per acre is now probably very near the average. The rent of land was then, and is still, extremely variable. Some lands being rented at only 2*s.* or 3*s.* per acre, while others were as high as £3; and are now raised to £5. This difference of the rental of different farms, arises, partly, from their nearness to, or distance from, large towns; but chiefly from the different degrees of natural fertility. It occurs not only over the whole county, but in each of its different divisions. For instance, in the parish of Mearns, a part of the first division, where the pastures are rich, many farms, in 1795, yielded an average rent of from 15*s.* to 20*s.* per acre, on a nineteen year lease; and though some fields which were in the best condition yielded in pasture from £2 to £2. 10*s.* per acre, there were other parts of this high division of the county, where the lands were let under 5*s.* per acre. Some of these *poor* lands are still not above 5*s.* per acre,

while fertile portions in the same parish are now at £4, and some small lots at £7 per acre. The farm of Muirshiels in the parish of Lochwinnoch, containing 2,200 acres, is let for the current nineteen years, at only £40.

In the middle district, the ordinary rent of arable land, in 1795, was from 15*s.* to 25*s.* per acre. There were many instances, however, of arable lands giving only 7*s.* per acre, while others, almost immediately adjoining, yielded a rent of £3 per acre. These last are now raised to £4 and £5 per acre, and in some cases £6 6*s.* per acre has been paid for fertile lands lying on the banks of the White-Cart, and within a short distance of the city of Glasgow. Sir John Maxwell has lately let 500 acres, in the parish of Cathcart, about two miles from Glasgow, on leases of ten years, at upwards of £2,000 of yearly rent: he closed the transaction with the old tenants two years before the expiry of the last leases.

In the lowest division, where the lands are of a deep rich loam, the rents were then, and are still, higher and less variable, than in the other districts. From £1 10*s.* to £2 10*s.* per acre, appears to have been the ordinary rent in 1795 of good arable land in this part of the shire. In some lands of very superior fertility, such as those lying near the confluence of the Gryfe and Black-Cart, the rent, on a nineteen year lease, might then be £3 per acre. And some of the very richest fields, near the burgh of Renfrew, might then be rated at £5 per acre. What was at £3 per acre in 1795, is now

rented at £5; and what brought £5 could now be let at £7 per acre. A portion of the lordship of Paisley, in this division, consisting of 496 acres of fertile land, lying near the town, accommodated with good roads, and in a favourable situation for manure and markets, with the privilege of subsetting, was let, in 1807, by public roup, in six farms, for nineteen years, at £1,909, or nearly £3 17*s.* per acre.

Garden grounds in the vicinity of the larger towns which were let in 1795 at from £4 to £6 per acre, are now at £8 and £10; and there is one instance, at Greenock, of 3 or 4 acres of garden ground now affording a yearly rent of £50 per acre: but these are subdivided into very small plots, and may be considered as taken for the pleasure and recreation of the occupiers, rather than as a subject of profit. Lands for manufacturing purposes, such as bleachfields, printfields, &c. were commonly let higher than the ordinary rate of arable land. In such cases, £3 per acre for poor ground, or lands of very moderate fertility, was, in 1795, a very common rent; and there are even instances of £8 or £10 per acre, of yearly rent, having been then paid for lands in situations favourable for manufactures.[a]

Formerly, a considerable portion of the rent was payable in grain; but, in general, the whole is now payable in money. In old leases, some of which were current so late as 1795, the tenant was bound to pay not only a certain sum of money-rent, but

a Fernenieze printfield, Levern printfield, &c.

also meal, oats, bear, capons, hens, sheep, veals, minister's stipend, schoolmaster's salary, cess, &c. &c. as well as to perform certain services to his landlord; such as plowing, harrowing, reaping, carting-coals, casting and bringing home peats, making and carting hay, &c. Almost all these conditions of agreement are evidently prejudicial to the interest of both parties, having an obvious tendency to diminish the farmer's ardour in the great business of agriculture; they are, therefore, mostly laid aside (excepting the payment of the land tax, and, in some cases, the minister's stipend and schoolmaster's salary)[a] and no clauses are now introduced into the leases that would check the husbandman's industry, or distract his attention from the constant diligence so necessary in rural occupation.

SECTION III.—TITHES.

Tithes in kind, which have been long considered as of material injury to the farmers in England, are almost unknown in Scotland. Prior to the reformation, the clergy who had right to the teinds or tithes made that right effectual by *drawing the teinds*, or taking in kind the tenth of the actual produce. After the reformation, the clergy in Scotland were reduced to the state of mere stipendiaries, or entitled on-

a The salaries of schoolmasters in the county, in 1795, were only £177: they are now £352.

ly to certain modified stipends, which were paid out of the teinds. King James VI. had, in the mean time, made *grants of tithes* and of church lands, to laymen, sometimes called *Lords of erection*, and sometimes *Titulars*. To put a stop to these erections, which were considered prejudicial to the crown, in 1587 an act was passed annexing all church benefices to the crown. A revocation of all church lands, or of teinds, took place soon after the accession of King Charles I. by action of reduction. After various proceedings, it was agreed to refer the whole to His Majesty by way of arbitration. Upon these submissions, Charles I. in 1629, pronounced several decrees arbitral which were afterwards confirmed by acts of parliament. A most important article in these decrees regarded the sales and valuation of tithes by commissioners, in order that each proprietor might draw those of his own lands. The valuation was directed to be a fifth part of the yearly rent, and this regulation was of singular advantage to the landholder. A decree of valuation fixed his tithes, or teinds, in all time to come, at a sum in money and grain; so that whatever improvements might be made at any future period, or however much the value of the land might increase, the landholder never could be obliged to pay, either to the minister or titular, more than the amount of the teind ascertained by such decree of valuation.

At the early period (1587) already mentioned, when the whole church lands and teinds in Scotland were annexed to the crown by act of parliament, such church lands as had been previously dis-

posed or granted to *colleges*, and schools, were excepted, and afterwards (in 1641) when an act was passed entitling heritors to value or purchase their teinds, the teinds belonging to colleges, schools, and hospitals, were prohibited from being sold, but might be valued. The university of Glasgow are proprietors of the teinds of several parishes in the neighbourhood of that city. Their rights to tithes in Renfrewshire, extend only over the lands of Polmadie, Hags, Titwood, and Shields, in the parish of Govan; to the whole of the parish of Renfrew,[a] which was anciently "a *parsonage and* "*dependency on the cathedral of Glasgow*,"[b] and to some ground near the centre of Cathcart, said to have belonged to the same see. The teinds in this case are similar to the tithes in England, and the only difference in the situation of proprietors of ground in Scotland, the tithes of which belonged to colleges, &c. &c. and of proprietors in England is, that the proprietor in Scotland by obtaining his teinds valued under the act 1641, has it in his power to get these teinds fixed at a fifth part of the present rent, which teind-duty cannot in future be increased. This is a great and important difference, and it uniformly produces a moderation on the part of universities in levying their teind, in order that the heritors may not be induced to have recourse to a valuation.

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a Charles I. in 1630 gave the college of Glasgow the teinds of the parishes of Renfrew and others, and the gift was confirmed by parliament in 1685.

b Crawford's History of Renfrewshire.

The college of Glasgow were in use to allow the heritors to possess their teinds on leases of nineteen years, renewed from time to time, on receiving a small modus in name of composition, and a small annual rent in money and grain; and we find that till within these last twenty or thirty years, few of the heritors of the parishes of which the college of Glasgow are titulars obtained valuations of their teinds; but the rapid rise of rents, and the progress of agricultural improvement, since the separation of Great Britain from the American colonies, have had the effect of making most of the heritors value their teinds. It is but justice to remark that the parties have been disposed to settle with each other in a fair and liberal manner. In several instances heritors have got the teind fixed at 4*s.* per acre, and none of them, it is believed, pay more than 15*s.*

The ministers in country parishes are paid their stipends from the landed estates in the county, as in other parishes in Scotland. The ministers in the towns of Paisley and Greenock are paid by the Magistrates or feuars, according to decreets of the court of teinds.

The following will be found a pretty accurate account of the value of each minister's living in this county, as stated in the Statistical account of the parishes. Besides a stipend in money, meal and barley, the ministers in country parishes are possessed of a manse (or parsonage house) with offices, and a few acres of land $4\frac{1}{2}$ acres, including the ground occupied by the buildings and garden, being the

minimum. Valuing the house and offices at £20 of yearly rent, the glebe at 40*s.* per acre, and grain at 16*s.* per boll, the annexed table will shew the value of each living in 1791:

Table of ministers' stipends in 1791.

Parishes.	Money stipend.			Meal & Barley.	Manse & Glebe.	Total amount of each living.		
	£.	s.	d.	Bolls	£.	£.	s.	d.
Abbey of Paisley, 1st charge,	4	3	4	160	30	162	3	4
Do.....2d.....do...	20	16	8	128	0	123	4	8
Greenock,.....	96	0	0	0	50	146	0	0
Port-Glasgow,.....	100	0	0	0	12	112	0	0
Kilmalcolm,.....	63	17	$9\frac{1}{6}$	48	18	120	5	$9\frac{1}{6}$
Houston and Killallan,.....	78	0	0	66 14	32	174	0	0
Erskine,.....	25	18	$2\frac{5}{6}$	$110\frac{1}{3}$	30	144	2	$2\frac{5}{6}$
Inchinnan,.....	20	0	0	128	36	158	8	0
Renfrew,.....	0	0	0	192	30	183	12	0
Innerkip,.....	29	3	4	78	28	119	11	4
Mearns,.....	27	13	0	80	30	121	13	0
Eaglesham,.....	79	3	4	40	30	141	3	4
Neilston,.....	33	10	0	112	32	155	2	0
Cathcart,.....	10	16	8	108 20	30	143	4	8
Lochwinnoch,.....	2	0	0	127	31	134	12	0
Kilbarchan,.....	51	13	4	112	53	194	5	4
Eastwood,.....	22	4	$5\frac{1}{3}$	80 16	30	129	0	$5\frac{1}{3}$
Greenock, new parish of,.....	105	0	0	0	25	130	0	0
Paisley, three parishes of,... £130 each,.....	390	0	0	0	0	390	0	0
Total livings of 21 ministers,	1160	0	$1\frac{1}{3}$	$1619\frac{1}{3}$	527	2,982	8	$1\frac{1}{3}$

Since the year 1791 the livings of all the ministers in this county have been augmented, and their manses rebuilt or repaired. Computing their glebes, manses, and offices, in general, at £50 per annum, and calculating meal at £1 4*s.* 0¼*d.*, and barley at £1 6*s.* 0¼*d.*, which are the average fiar prices for the last eight years, the following table shews the present value of each living.

Table of ministers' stipends in 1809.

Parishes.	Money stipend.			Meal.	Barley.	Glebe, manse & offices.	Total.			Patrons of each living.
	£.	s.	d.	Bolls.	Bolls	£.	£.	s.	d.	
Abbey of Paisley, 1st charge,	14	3	4	128	128	60	394	14	0	Marquis of Abercorn.
Do.....2d....do....	20	16	8	160	32	0	254	14	0	Id.
Greenock,.....	111	0	0	32	0	450[a]	599	8	8	Sir John Shaw Stewart.
Port-Glasgow,.....	125	6	8	0	0	21	146	6	8	Magistrates of Glasgow.
Kilmalcolm,.....	66	13	4	80	80	50	317	0	0	M'Iver Esq.
Houston and Killallan,.....	25	0	0	$153\frac{1}{4}$	$14\frac{1}{2}$	50	278	5	2	Fleming of Barrochan and Speirs of Elderslie.
Erskine,..... ..	8	6	8	$106\frac{3}{4}$	$106\frac{3}{4}$	50	325	13	0	Lord Blantyre.
Inchinnan,.....	58	6	8	$156\frac{1}{4}$	$3\frac{3}{4}$	50	300	17	7	Campbell of Blythswood.
Renfrew,.....	8	6	8	240	0	70	366	11	8	The King.
Innerkip,.....	72	0	0	66	12	50	216	18	1	Sir John Shaw Stewart.
Mearns,.....	63	0	0	80	0	50	209	1	8	Id.
Eaglesham,.....	8	6	8	$95\frac{3}{10}$	$95\frac{1}{10}$	50	296	9	7	Earl of Eglinton.
Neilston,.....	96	10	0	112	0	50	281	0	4	Speirs of Elderslie.
Cathcart,.....	8	6	8	143	20	50	256	2	11	Gordon of Aitkenhead.

Lochwinnoch,.....	68	6	8	128	32	50	313	5	4	Mr M'Dowall's Trustees.
Kilbarchan,.....	8	6	8	$99\frac{1}{8}$	$99\frac{1}{8}$	80	336	11	2	Napier of Milliken.
Eastwood,.....	50	0	0	96	64	50	298	14	0	Sir John Maxwell of Pollock.
Greenock, two new parishes of,.....	450	0	0	0	0	0	450	0	0	Magistrates and feuars of Greenock.
Paisley town, three parishes of,.....	720	0	0	0	0	0	720	0	0	Magistrates of Paisley.
Total livings of 22 ministers,	1,982	16	8	$1,875\frac{7}{16}$	$687\frac{1}{3}$	1,231	6,361	13	10	

The money stipends, as stated above, include the allowance made to the several ministers for communion elements, except in the cases of Greenock and Paisley town.

a By an act of parliament obtained in 1801, the minister's glebe of the old parish of Greenock was allowed to be feued out for building, at an average rent of £100 per acre, which explains the unusual amount of his living.

SECTION IV.—POOR RATES.

Assessments for the poor are not known as a charge upon land, excepting in two parishes of the county, the abbey of Paisley and Kilbarchan. The assessments are levied in equal shares from the proprietors, and tenants or householders. In consequence of the great influx of work people into these parishes, and the great number of wives, widows, and children, of soldiers, whom the war has brought upon the poors' roll, the assessment in these two parishes has, since the commencement of the war, greatly increased. In the other parishes of the county, the poor are maintained by the contributions at the church door, the dues for proclamations of marriages, sums paid for the use of mortcloths, and the interest of donations; when these are inadequate, a voluntary assessment of the heritors takes place, which is often found necessary in parishes where manufactures are established. The mode of assessment in the parishes of the abbey of Paisley and Kilbarchan is stated in the Statistical account of Scotland.[a] Though the system is not by the real rent, yet it is easy, upon comparing the amount of the assessment with the real rent of these parishes, to ascertain the rate per pound. In the year 1790, the assessment in the abbey parish of Paisley was nearly 2 per cent on the ren-

a See Statistical account of Scotland, vol. vii. & xv.

tal; that is, one per cent payable by the proprietor, and the like sum of one per cent by the tenant. It is now increased to about double that sum, and may amount to from £1200 to £1500 per annum.

In Kilbarchan, a few years ago, the assessment for the poor was very inconsiderable. It is now about *5d.* in the pound, or within a trifle of 2½ per cent on the rental; the one half payable by the proprietor, the other half by the tenant. But the mode of assessment in that parish, for some years past, has been, by charging *6d.* per pound Scots of valuation on the landed property, which produces £157; and raising about £70 or £80 per annum, from manufacturing establishments. The total annual distributions are about £240.

SECTION V.—LEASES.

Many proprietors are now reducing the length of leases to ten or twelve years. In general, however, this happens when a renewal is granted, two or three years before the expiration of the former lease; a practice which is obviously beneficial to both landholders and tenants; as the tenant, in this case, never allows his farm to get out of good condition, so that his profits continue steady; and he is enabled to pay a higher rent to the proprietor, than he could do, were he to commence with a run out farm. Leases are, however, still commonly granted

for nineteen years; where they are granted for a longer period, an additional rent is sometimes agreed to be paid before their expiration. This progressive method is found to suit the circumstances of some parts of the county. The ordinary terms of entry are Martinmas and Whitsunday: Martinmas in the case of arable lands, and Whitsunday in that of houses, yards, and grass.

The tenants are commonly bound to keep two thirds of their farms in grass, so that the land may be pastured double the time it is ploughed. They are, in general, debarred from assigning their leases, or subsetting any part of the farm without the consent of the proprietor; though the landlord often agrees to dispense with these clauses. They are bound to consume the fodder on the ground; or, in other words, to apply the whole dung produced upon the farm; and, in a few instances, to apply a certain yearly quantity of dung; and sometimes the proprietor himself engages to furnish a certain quantity of lime or other manure. In the vicinity of towns, where straw can be more profitably disposed of than by rotting it for manure, and where great quantities of dung can be procured, the obligation to consume the fodder on the ground is not insisted on; and the proprietors, in general, give liberal scope to the tenants' exertions without fettering them with strict clauses as to the mode of managing the farm. Where there are young hedges, the tenant is not allowed to keep sheep. Lastly, he is commonly bound to keep the houses and fences in repair. This clause, although a very

material one, is little attended to by the tenants; and the best prestation in a lease, for keeping fences in complete order, would be, to employ a hedger solely for this purpose: the expense to be paid equally by the proprietor and tenant.

Strict rules respecting the rotation of crops, and mode of culture, are seldom prescribed. The tenants are commonly bound to dung, labour, and manure their farms, in a complete and sufficient manner, and to crop them according to the rules of good husbandry. A considerable part of the lordship of Paisley was let, in 1807, two years before the expiry of the old leases, in seven separate farms. The tenants, for the first fifteen years of the leases, are not bound to any particular rotation; but during the last four years the covenants are;

1. That there shall not be above one fourth part of the lands in wheat; and that, after fallow or green crop, sufficiently dunged with, at least, thirty full cart loads of well made dung per acre:

2. One fourth part in any other white crop:

3. One fourth part in green crop, or fallow, dunged as above: and,

4. One fourth part in sown grass; the proportion so sown to consist of entire fields, and not in broken parts.

Sometimes clauses are inserted reserving liberty to the proprietor, upon paying certain damages, to open quarries, work coal or lime, and cut timber; all of which are constantly considered as his sole property; and of late it has been customary to retain a right, at any time, during the leases, to

resume the possession of such water, or such pieces of land, as may be found necessary for bleachfields, printfields, mills, or machinery. The practice, so happily gaining ground, of granting to the tenant a renewal of his lease a few years previous to its expiration, saves the grounds from those scourging crops, and that neglect of manure, which in the last years of a lease are so often experienced.

SECTION VI.—EXPENSE AND PROFIT.

We cannot expect to obtain *accurate* information from the tenants of land in this county, concerning either the expense and profit attending farming operations in general, or even the gains arising from the cultivation of any particular species of crop. They are not educated and trained to keeping accounts, so can produce no written statement of their outlays and gains; the only data from which conclusions can be fairly drawn. They would consider minute inquiries on these heads as leading to disclosure of private affairs. In this county, men of education, wealth, and enterprize, are engaged in manufacturing and mercantile pursuits; and it is generally admitted, that the return, at least in this district, from the application of capital in those ways is greater than from capital employed in agriculture. It is certain, however, that the capital destined for farming purposes is not exposed to much risk; and though the returns may be slower,

the balance on the whole may be more nearly equal, than is generally supposed.

The gains of farmers, till of late years, arose principally (as in some instances they still do), from habits of parsimony, and from frequent transactions in buying and selling cattle and horses at fairs and markets. But many of them are now in more prosperous circumstances than formerly; they have accumulated capital, they are cultivating their lands successfully, and are drawing income from the produce of their farms.

From what has been already stated as to the rent of land; and from what will appear in the sequel concerning the price of horses and stock, the rate of labour, and the prices of farm produce, a calculator may form an estimate of the profits of farming in this district, compared with those in other parts of the kingdom. Under the property act, it is assumed that the profits of farmers are in proportion to the amount of their rents; but this assumption is very erroneous, and so absurd as not to deserve refutation.

CHAPTER V.

IMPLEMENTS.

THE plough which is in most common use in this county is the Scots, but made much lighter than it formerly was. Ploughs of a new and better construction have been introduced and are gaining ground. They are of the kind contrived by Mr Small of Berwickshire; with a curved mould-board of cast-iron; and new improvements are daily making in their construction. The latest improved ploughs have the sheath, sole, mould-board, &c. of cast-iron; so that the only parts which are of wood are the beam, stilts, and one or two necessary wedges. Carts are generally constructed for one horse; and, for easing draught by diminishing friction, iron axles are employed, especially in the neighbourhood of Paisley. The diameter of the wheels is generally $4\frac{1}{2}$ feet. Coup, or turning carts, are scarcely used. As the horse hoeing husbandry is little practised, the necessary implements for the operations which it requires are hardly known. Too little attention is paid to the brake and roller. Lister's patent machine for cutting straw is lately introduced into the county; and it is presumed will be found a valuable addition to the present implements of husbandry.

The prices of farming utensils in 1795 compared with 1809, are as follow;

Utensils.	1795.			1809.		
	£.	s.	d.	£.	s.	d.
A good close-cart, with iron axle, and wheels strongly mounted with iron, when complete,...	9	10	0	17	0	0
A *coup-cart*, or turning cart, with similar axle and wheels,	12	10	0	19	0	0
A plough of the best construction, fully mounted with horse trees,.....	3	3	0	4	4	0
Winnowing machine, or *fanners*, on the newest construction,..	4	0	0	8	10	0
A pair of harrows, or brake for two horses, on the best construction,.....	2	2	0	4	0	0

The threshing machine till lately was little known in Renfrewshire, there being, a few years ago, only two or three in the county, which were introduced about the year 1796. In a district where the wages of farm servants are already high, and constantly advancing, it is certainly of importance to introduce any scheme which may have a tendency to save labour; and consequently threshing machines are now more numerous. Experience has completely proved, that by employing threshing machines (driven either by wind, water, or horses) there is a great saving of labour, independent of the additional quantity of grain which the machine gives by performing the work more effectually.

There are other inducements for adopting this piece of machinery: a farmer by means of it can employ his horses and servants in threshing out his crop in stormy or rainy weather, when no operation can be performed in the field. He thereby at once brings to market a considerable quantity of grain, without waiting for the tedious operation of the flail; and thus supplies the public at the time they most stand in need of corn; a circumstance conducive to the advantage not only of the individual, but also of the community. Some of these machines, on good and simple principles, are in the possession of farmers in neighbouring counties. They are said to have cost only about £50, are worked with two or three horses, and thresh six bolls in an hour; and by the addition of a simple apparatus they can be rendered fit for the winnowing of the corn. It is to be hoped that the general want of this useful

piece of farming machinery will soon be supplied in Renfrewshire. In this county, the practical knowledge of mechanics has been very successfully applied to a great variety of purposes of manufacture; and, were our ingenious artists to bestow attention on this valuable engine, they would probably improve its construction as well as diminish its price.

Some of the *churns*, it is believed, are peculiar to the county. Many are wrought by a lever in a manner similar to the working of a pump; in which case the churn is in a vertical or upright position, and the end of the churn-staff is connected with one end of the lever. But the most material improvement is the invention of churn mills by the application of a water wheel. The churn, in this case, is in the form of a hogshead, and lies fixed in an horizontal position. The frame for breaking the milk is moved, with a moderate velocity, on an axis passing through the centre of the churn; while the churn itself remains at rest; and to prevent the escape of the milk, the aperture for admitting the axis is small and closely fitted. The whole apparatus is simple, and is similar to what is employed in a common corn mill. The expense is small, and the advantage in saving labour great. The butter, in consequence of the equable and constant motion, is supposed to be of a better quality, and in greater quantity, than what is produced by the common mode. When water cannot be obtained, a horse might be employed.

CHAPTER VI.

INCLOSING.

THE county is, in general, well inclosed. Great advantage both with regard to the increase of rent, and to the quantities and kind of produce, have been found to result from inclosing. It is difficult to ascertain to what degree rents have been advanced in consequence of it; because rents have increased from better culture, greater variety of crops, better markets, a more general application of manure, and similar circumstances, as well as from inclosing. Thus a small estate, consisting of seven small farms, in the parish of Neilston, which in 1765 yielded £120, is now let at £800. In the same manner, an estate in that parish which was rented in 1768 at £216, is also raised to £800: and, in the adjoining parish of Paisley, a small estate which was let in 1765 at £233, is now raised to £1,300. Though these and similar advances of rent are not to be ascribed to inclosing solely, yet it may be fairly computed, that, in many cases, rents have been advanced 30 per cent from that cause alone. It has also occasioned a greater variety and a greater quantity of farm produce. About thirty years

ago, when the county was uninclosed, sown grasses were never attempted; but a great quantity of *hay* is now raised; and, as the ground is generally prepared for hay with a crop of barley, a much greater quantity of barley is also raised. The farmer has it likewise in his power to save his fields from the poaching of cattle in winter; which must greatly contribute to increase the quantity, not only of grass, but of corn.

The inclosures in the arable parts of the county, are generally from 5 to 12 acres. In the higher parts they are considerably larger. The mode of inclosing in the middle and low divisions, is generally by hedges and ditches. In the highest grounds it is generally by stone dikes. A sunk fence of stone, with a hedge on the face or top of it, is much approved of by many; and a thorn hedge planted on the surface, within a stone dike, produces a strong and beautiful fence. It may be here observed, that the sweet-briar has been found to be a good addition to the plants usually employed for hedges, on account of its vigorous and long shoots for a few years after planting.

The important inquiry, whether inclosures have increased or diminished population, does not admit of an easy solution in a great manufacturing county like Renfrewshire, where the population on the whole has for a considerable period been constantly increasing, owing to the demand for labour at its numerous manufactories. From the fluctuations of trade the population may vary at different periods; and the numbers of inhabitants in one part of the county

may have decreased, while in another they are augmented. Accordingly, there are the strongest reasons to believe, that the numbers in the country part of the county, or those parishes where manufacturing villages have not been established, have *decreased*,[a] while the population of the towns and villages has been greatly advanced; and a description of peasantry, called *cottars* or cottagers, who were employed by the more considerable farmers, as their labourers or assistants, are now hardly to be found.

The occupiers of land may be considered as the most permanent part of society. Few circumstances tend to occasion their removal, or to cause any sudden increase or diminution of their number, especially in a county where they hold their possession by so sure a tenure as a nineteen year lease. In an agricultural survey, it may be of importance, to ascertain if their numbers are different from what they were in former times. The number of farmers may be very correctly known one hundred and fifteen years ago, by examining the survey which was then made of the inhabitants in the different parishes in the county, for the purpose of a general poll-tax,

a This appears evident if we compare the population of Erskine, Inchinnan, Innerkip, Eaglesham, and Kilmalcolm; (parishes where manufacturing towns and villages do not exist) in 1755 with their population in 1795.

Parishes.	Population in	
	1755.	1792-5.
Erskine,	829	808
Inchinnan,	897	806
Innerkip,	1,590	1,280
Eaglesham,	1,103	1,000
Kilmalcolm,	1,495	951
Total,	5,414	4,845

Upon comparing these records with the lists of the occupiers of land (in 1795) in a *few parishes*, where their numbers were accurately known, it appears that the number of farmers is diminished.[a]

Such being the fact, it becomes a question how far this has been occasioned by inclosing. Inclosures render fewer hands necessary for tending and folding cattle, they may therefore be in some degree the cause of a decrease of the number of *cottars;* but the diminution of this description of peasantry, may probably be ascribed, chiefly to the introduction and progress of manufactures, which may have given a different turn to the labour and employment of the inhabitants, and may have occasioned their resort to towns and villages. As inclosures also render large farms in many respects more easily managed; it is probable they may, therefore, have partly suggested the union of farms, or the addition

a The original lists or records for 1695 and 1696, are in the hands of the Rev. Mr Boog, minister of the abbey parish of Paisley; from a careful persual of which, the following view of the number of farmers in 1695, in the following parishes, is drawn up, and compared with the numbers in 1795;

Parishes.	Number of farmers in	
	1695.	1795.
Eaglesham,	135	63
Mearns,	138	124
Neilston, comprehending Knockmade and Shatterflat,	178	153
Cathcart,	41	29
Kilbarchan,	195	104
Lochwinnoch,	186	148
Inchinnan,	54	30
Erskine,	80	70
Total,	1,007	721

of smaller to larger possessions. This junction of farms, in the degree in which it has taken place in Renfrewshire, must be considered rather advantageous than prejudicial to the interests of the county.

Nothing particular occurs as to gates. They are of various forms and prices, and commonly made of foreign fir. Many farmers introduce three movable cross bars of timber, in a mortice of wood or stone, resembling post and rail. The ordinary gates are composed of three cross bars with an angular rail. The farmers are in many instances extremely deficient in securing their inclosures with proper gates. A few thorns or bushes are often carelessly thrown into the gate-way, instead of a stout well finished gate.

CHAPTER VII.

ARABLE LAND.

SECTION I.—TILLAGE.

THE first, or more elevated, district of this county is chiefly adapted to pasture, and only a small proportion of the grounds is in tillage. In the middle and low divisions, the proportion in tillage is probably about one fourth. Many of the ploughmen are very expert, and their progress in levelling, straighting, and laying out ridges, particularly since competitions or *ploughing matches* have been introduced, is highly deserving of praise. At no very late period, many of the ridges were of a serpentine form, broad, and gathered to a considerable height in the middle: they have been reduced by degrees, and the alteration has been productive of great advantage. Forty or fifty years ago, it was no uncommon thing for the farmer to delay commencing his field operations till the season was far advanced. In a small publication, addressed by a clergyman[a] of this county to west country farmers, in 1772, the advantages of early ploughing are stated; and he

a The late Rev. John Warner, minister of Kilbarchan.

justly observes, " that nothing can be more ab-
" surd than for our farmers to have their ploughing
" to begin in the month of March, and their sow-
" ing in the month of April; while they suffer
" some of the finest weather in January or Febru-
" ary to pass without any field employment. This
" neglect often obliges them to plough in all weath-
" ers, and either to sow in a very indifferent season,
" or to delay it, till it is so late, that the produce
" is both thin in the grain, and comes by far too
" late in harvest."

There is not the same reason now to complain of the neglect of our farmers; still, however, earlier ploughing and sowing ought to be more carefully attended to, and particularly in this variable climate.

SECTION II.—FALLOWING.

Fallowing is practised in Renfrewshire but in few cases; and it would be much for the interest of the farmer to pursue this system more frequently. The farmers prefer giving three or four furrows to their barley crop, or taking a crop of drilled potatoes. Fallowing may be considered as the first step towards bringing lands into good tillage. It is particularly requisite where the ridges of fields are too high, or not straighted, or where stones and other obstructions are to be removed. Afterwards, when the lands are in proper condition, it may be dropped, and a green crop may supply its place.

SECTION III.—ROTATION OF CROPS.

There is no particular rotation followed over the county. The farmer is frequently determined, in the choice of the crop to be cultivated, by the demand for grain, the season, or the advantages to be derived from a particular soil. The following appear to be the prevailing practices, and some of them, it must be confessed, are injudicious and unprofitable.

In the *higher* district, after about seven years pasturage, the best rotation in common use is;

1. Oats;
2. Oats;
3. Barley;
4. Hay; then ordinary pasturage.

The pasture lands, before ploughing, are frequently manured with dung, or a mixture of earth and lime. Often, however, a different rotation is followed. After manuring the preceding summer, the ground is ploughed about the end of March, and oats are sown for three years successively; then, without grass seeds, or additional manure, it is left to itself for six years, when the same rotation succeeds.

In what we have termed the *gently rising* district, the rotation most commonly followed is;

1. Oats out of lea;
2. Oats;

3. Barley, with manure after three furrows, with clover and rye-grass.

After one or two crops of hay, the land is generally pastured for two or three years, and then broken up with oats. Many farmers, instead of two successive crops of oats, introduce with great propriety a crop of drilled potatoes with dung, as the second in rotation; and, in this case, the third, which is generally wheat, receives no manure.

On the grounds of a few gentlemen, a still more perfect rotation of the following kind is adopted;

1. Oats from grass;
2. Fallow or turnips with manure;
3. Barley with grass seeds; viz. six lbs. red clover; four lbs. white; with half a boll of rye-grass, per acre;
4. Hay; and then pasture, for such a number of years as is deemed expedient.

In the *flat* grounds, the most common rotation is similar to that which is in use in the middle division, excepting that the pasture is in general for a shorter period. On particular grounds, the following rotation was pursued in 1795;

1. Oats from grass;
2. Fallow;
3. Wheat;
4. Barley;
5. Beans and pease;
6. Oats;
7. Hay;
8. Hay; then pasture.

On others, where manure was particularly plentiful,[a] the rotation in 1795 was;

1. Wheat after fallow;
2. Pease and beans;
3. Barley;
4. Hay;
5. Hay;
6. Oats;
7. Fallow.

On the good lands near the river Cart, within the parish of Cathcart, the rotation of crops is similar to that followed on the haughs of Clyde, in the vicinity of Glasgow; viz.

1. Oats from lea;
2. Drilled potatoes with dung;
3. Wheat, with a slight top dressing of lime;
4. Clover and rye-grass, sometimes cut green, but most commonly made into hay; and afterwards pasture for two years.

The farmers in that district of the county admit, that this rotation has hitherto been the most profitable of any they have adopted.

The flat grounds about the burgh of Renfrew, have been long remarkable for producing potatoes of excellent quality, but the profits arising from them have induced the possessors to follow a rotation, in which that beneficial plant bears much too great a proportion for the soil.

In these two districts of the gently rising and lower grounds, there are many farmers of great

a At Portnauld distillery, near Inchinnan, in 1795.

activity, and their industry has been rewarded with success.

SECTION IV.—CROPS COMMONLY CULTIVATED.

The grains principally cultivated are oats and bear: some barley, some wheat, and some beans and pease are also sown, but not in a great quantity. The culture of wheat has greatly increased of late years; but beans and pease are not raised so extensively as formerly, in consequence of an opinion that they are less productive, since rye-grass has been sown, and lime used as manure. The most probable cause, seems to be the rye-grass; but closer and more accurate observation, will be necessary, in order to ascertain how far the crops of pease and beans have degenerated or become less productive, and to determine the causes which have occasioned these effects. Green crops are little cultivated. Clover is never sown as a green crop; and very few turnips, either in drills or broad cast, excepting at gentlemens' seats. Some attempts were lately made by the farmers in turnip husbandry; but the soil of this county, excepting in the higher district, is, in general, too stiff for that kind of crop, and the farmers are already *prejudiced* against turnips; it being a general opinion among them that the crop following turnips, is far inferior, in bulk and quality, to a crop succeeding potatoes. Tares, in a few cases, have been sown for cutting green, and when

tried have been found to be very productive, and a good preparation for a succeeding crop.

Potatoes.—Miller, in his Dictionary, states, that the potatoe was introduced into England from America about the year 1623; but Gerarde, in his Herbal or History of plants, printed in 1597, and dedicated to Lord Burleigh, gives a description of two kinds of potatoes then cultivated in gardens; one called the common, and the other the Virginia potatoe. He mentions that he bought the first, or *common kind* of potatoe, at the exchange in London, and had received roots of the other kind from Virginia, and cultivated both, and many other rare plants, in his garden. "He added, (as he expresses himself,) all "the variety of herbs and flowers that might any "way be obtained; laboured with the soil to make "it fit for the plants, and with the plants to make "them delight in the soil, that so they might live "and prosper under our climate as in their native "and proper country." But, though introduced into this kingdom at that early period, the culture seems not to have been much extended for one hundred and fifty years. So late as the year 1760, the early kinds of potatoes were a rarity at the table; their culture was so ill undertsood, and so little known, that, even when raised in *the garden*, they were never produced before the *middle of August.*

Potatoes are cultivated in this county with great success; they may be said to be almost the only green crop, and almost the only instance in which the drilled husbandry is practised. They were

introduced to Paisley and Renfrew, about the year 1750, from Kintyre; were at that time first planted in the field, and were not till then an article of general consumpt, but are now cultivated extensively. They are planted in drills from 2 feet 4 inches to 3 feet distant, and dung is always applied. In the culture of this useful vegetable, it may be truly said, that Renfrewshire and the neighbourhood of Glasgow excel most counties, probably most parts of the united kingdom. The drills are straight and well formed. The crop is kept extremely clean from weeds; and a degree of neatness and industry, highly commendable and worthy of imitation, appears almost every where through the county, in the culture and management of this valuable crop. One proprietor [a] had fifteen acres in 1793, and twenty-six acres in 1794.

The mode of culture of potatoes in the parish of Cathcart is stated in the Statistical account of that parish, published in 1793, as follows: "Summer fallowing is not much practised. Instead "of this the ground is prepared for potatoes, by "giving it repeated plowings, and laying upon it "from 40 to 60 carts per acre of Glasgow dung. "Each cart costs from 2*s.* 6*d.* to 3*s.* before it is "laid upon the field. The potatoes, being planted "in drills, are first cleaned with the hand hoe, "when beginning to appear above the ground, after which (as their perfection, it would appear, "in a great measure depends upon their being "taken the best care of when young, till they

a Sir John Maxwell.

"arrive at a certain length) *they are repeatedly* "*dressed with a small single horse plough.* The "profit arising from this crop, properly managed, "is so great, as scarcely to be credited in places less "favourably situated. £10, £15, and even £20 "per acre, have been received for them, before "they have been dug up. It must be owned, in-"deed, that nothing but such a market as Glasgow, "to which a bulky article like this can be transport-"ed, and immediately sold, could enable the far-"mer to derive so much."

The kinds of potatoes, in most common use for the table, are the round white, the white kidney, and a considerable variety of the red, purple and streaked potatoes. A kind of potatoe is sometimes planted called the white bloom, chiefly intended for the food of cattle; and from this species a greater produce is obtained, than from those planted for the table.

There have been many trials of the effect of pulling the flowers or blossoms from the potatoe, so as to prevent the seed from forming, and the result has been an increase of produce. One gentleman [a] prosecuted this experiment with great care and attention, during the years 1803 and 1804, in fields of two acres, each year, cultivated according to the usual mode in drills, and planted in manure. By taking alternate portions of equal area in the same field; pulling the blossoms from some of these divisions, and leaving others to ripen the seed; attending in

a Mr Wilson, at Deanside, near Renfrew.

the autumn when the potatoes were taken up, and measuring the produce with great care, he uniformly found, both years, the quantity increased 10 or 15 per cent, where the blossoms were taken off; there being very few small potatoes in these portions of the field. He also found the quality much improved in consequence of the crop *ripening sooner than usual*, where the blossoms had been pulled, and therefore not affected by the frosts, which often set in so early that the growth of the potatoe is completely checked before it arrive at maturity. Having thus ascertained that the quantity and quality of the potatoe crop is much improved by pulling the flowers, he has continued the same practice for the last five or six years, on fields of from four to nine acres, and he considers this experiment well worth prosecuting to any extent. The blossoms are pulled by children from ten to twelve years of age, their wages six-pence per day, and the expense is about three shillings per acre. About four acres of potatoes, from which he took the blossoms, in 1808, produced 65 bolls per acre, Renfrewshire measure. The same practice has obtained for many years among heritors in the glen of Lochwinnoch; as stated by the late Mr M'Dowall, in a letter to the president of the board of agriculture; in which he remarks, that if it shall be ascertained by repeated experiments fairly made, that *potatoes ripen sooner when the flowers are taken off*, this consequence of the practice must be more valuable than the increase of weight.

Oats are sown in March and April; bear from

the first of May to the beginning of June; wheat in September and October. Reaping generally commences about the beginning of September, and the harvest is seldom finished till the beginning of November. When the harvest is protracted till *this late period* of the season, which, in consequence of the climate, unavoidably happens in many parts of the west of Scotland, the husbandman's labours, anxious cares, and expenses are greatly increased. It has been truly said by a writer of this county on the difficulties of a bad harvest, that the farmer's misfortune in this case "happens at the very time "when he thought of enjoying the return of all his "labours. The happiness, the joy of harvest, "which is so much celebrated in ancient writings, "and has afforded their finest allusions; that joy "which, in happier climates, is still the cause of "mirth and song, farmers in the west of Scotland "seldom taste in full security and ease." The harvest of 1781, was nearly completed all over this county in *August*. That of 1782, not till the middle of November.

The quantity of oats sown is from 10 pecks to a boll per acre; of barley 10 to 14 pecks; of wheat about 3 firlots. The kinds of oats are Blainsley, Dundee or Angus, and several of the early species. The Tartarian oats were also sometimes cultivated, and found to be uncommonly prolific; there being instances of a return of 22 bolls for one. But they are now given up, being found by far too late for this climate. The most commonly sown pease are the Hastings, or the Magbiehill.

The quantities of farm produce, in good grounds, may be rated as follow;

Oats, from 8 to 10 bolls per acre;
Barley,— 6 to 8;—
Wheat,— 8 to 12;—
Beans and pease,— 5 to 8;—
Potatoes,— 45 to 50:—

And, in many instances, 12 bolls of oats per acre have been produced, equal to 76 Winchester bushels or $9\frac{1}{2}$ quarters. Some parts of the county exhibit uncommon instances of fertility. In one of those fine holms situated on the banks of the White-Cart, in the neighbourhood of Pollock-house, some fields produced, in 1794, *eighteen bolls* of oats per acre, of the best quality, which is equal to $14\frac{1}{4}$ quarters.[a] Some of the lands lying near the conflux of Gryfe and Black-Cart are also highly fertile; they were rented in 1795, in a nineteen years lease, at £3 per acre; and are now at £5 5s. The great produce per acre of some fields of oats is certainly to be ascribed, in great measure, to the practice of allowing the lands to remain in pasture a considerable time, as well as to the fertility of some particular spots.

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a The average weight of oats may be about 56 lbs. per firlot, equal to about 35 lbs per Winchester bushel. Upon good lands, where the grain is well ripened, they have been known to weigh 63 lbs. per firlot, which is equal to $39\frac{3}{4}$ lbs. per Winchester bushel: one boll of such oats will produce meal at the rate of from 16 to 17 pecks per boll; or, as the farmers in this county express themselves, "*more than meal for corn;*" that is at the rate of about 21 pecks per English quarter, or $182\frac{3}{4}$ lbs. of meal per quarter.

SECTION V.—CROPS NOT COMMONLY CULTIVATED.

We have already stated that *turnips* are seldom cultivated. Their importance as food for cattle is sufficiently obvious, but their culture is not gaining ground. *Carrots* [a] have been occasionally raised on a small scale, and are well known to be particularly nutritive to horses. *Cabbages* have also been sometimes planted in the field; and *rata-buga* or Swedish turnips, as food for live-stock. *Flax* in small quantity is sown, chiefly in the parishes of Lochwinnoch and Kilbarchan; but no progress is making in extending the cultivation of that article.

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a The greatest extent of carrot crop was at Pollock.

CHAPTER VIII.

GRASS.

SECTION I.—NATURAL MEADOWS AND PASTURES.

THE *higher district* of the county naturally runs into good pasture; and, excepting in those bleak and exposed situations where heath abounds, the surface is covered with grass and white clover. The middle region produces only a scanty pasture; but, as this part of the county is chiefly situated in the neighbourhood of Glasgow and Paisley, the farmer generally avails himself of the advantages of manure, and sows a mixture of rye-grass and clover on the lands which he has thus put into good condition. The same method is pursued on the flat grounds. But it is the first, or more elevated, district which is chiefly adapted for pasture, and, in many places, the value of its peculiar soil is well estimated, and a culture suited to it carefully pursued. In the parishes of Mearns and Eaglesham particularly, and in some parts of Neilston and Lochwinnoch, the lands of this species exhibit very often uncommon appearances of fertility. There, the farmer wisely considers the raising of grain as a secondary object, and attends chiefly to the improve-

ment of his pastures. When he is happily favoured with lands of the above description, a moderate attention ensures to him a very luxuriant growth of the best natural grasses; which, in the same field, follow in regular succession from an early to a late period of the season. What is deemed necessary in such situations is to encourage the natural tendency of the soil, by breaking up the pastures very rarely, cropping gently, keeping them in tillage only two years, and slightly top dressing with lime, after they are returned into grass. It would perhaps be well, both for the country and for the farmer, were these simple methods more generally followed in this district. But it too often happens that the tenant, on such grounds, pursues a culture more laborious, and in the end less lucrative. When, as is often the case, his farm consists of a portion of wet and moorish ground, along with some of the dry soil above mentioned, he is tempted to trust to the former for pasture to his live-stock; and, with a view to a few good crops, which he deems necessary for fodder to his cattle or meal to his family, to labour the latter too severely with the plough. By this means, such land is not allowed to remain so long in pasture as to bring a close and rich herbage over the surface. It is often broken up at the time when it begins to be able to support such a number of cattle as would enrich it with their dung; and thrown into tillage before it acquires any tolerable degree of fertility. In this state it remains, until what it has acquired be exhausted. It is then left to itself, to be over-run with weeds and coarse herbage,

till, as happens in about four years, the good grass begins to prevail, when it is again unmercifully torn up by the plough.

In this upper district there are a number of natural meadows, affording a coarse kind of hay for winter fodder; they are occasionally watered in a very imperfect manner, and very seldom manured. Their produce is scanty, and the hay always of inferior value.

SECTION II.—ARTIFICIAL GRASSES.

It has been already observed, that, in the most elevated district, the far greatest part of the lands is chiefly in pasture. In the middle division there may be about three fourths; and in the flat district smaller quantities of the ground are appropriated to that purpose. When grounds are laying down in pasture, the quantity of clover generally sown throughout this county is singularly small. Many of the best farmers sow only from 4 to 6 lbs. per acre, along with 1½ bushels of rye-grass, and are confidently of opinion that more is unnecessary. It would be of importance to make some comparative experiments to ascertain the effect of this and a larger quantity. It must be allowed, in the mean time, that, with this small quantity, when the first crop of hay is cut, the after growth is often extremely rich. A gentleman in the east of the county, sowed 14 lbs. red clover to the acre, on

well cleaned land, rather tending to clay, and had a most luxuriant crop; but the *aftermath* was so strong, that it injured the roots of the rye-grass, though ascertained to be of the perennial kind. Unfortunately, a species of annual rye-grass was, some years ago, (in 1791 or 1792) introduced into the county, but the farmers were at great pains to extirpate it, by saving seed from hay of the second year's growth. The perennial seed being justly considered an object of the first importance, where well cleaned land is to be laid down to pasture, the venders of annual seed have, in some instances, been prosecuted for damages; and that useless grass now rarely occurs.

SECTION III.—HAY HARVEST.

The *hay harvest* is generally in July on the low arable lands where artificial grasses, namely clovers and rye-grass, are sown, for these are now the only grass seeds cultivated: the produce, when the ground is in good condition, is from 200 to 250 stones per acre, that is from 2 to 2½ tons; the stone being 22½ lbs.

The practice of making hay is in this part of Scotland well understood; no more work is bestowed on it than merely to dry it, preserving at the same time the natural juices and flavour. The custom of repeatedly spreading out hay to the weather in the day time, and gathering it up at night, till it is well

made, is deservedly exploded. "The apothecary "who means to preserve the good qualities of his "medical herbs, dries them in the shade, and would "esteem them lost if exposed to the sun but for a "day. Is it then possible to expose hay to a hot "sun for two or three days without evaporating "some of its good qualities?"[a] The hay, in some parts of Scotland, is cut so late as to have much of its seed ripened and shaken by the operations of making. This is seldom the case in Renfrewshire. The hay is put into tramp ricks, of from 100 to 300 stones, before carrying it to the stack-yard: and, either in the rick or stack, the farmer, in some instances, gives it that sweating, or heat, which makes all cattle so fond of it, and which renders it so salutary to live-stock. "Another method of winning "hay is bundling it up in sheaves, and *stooking* it, "as we do corn; this method is only used when the "design is for seed;" and there is no doubt that the stooking will preserve it a long time from the injuries of the weather. It is often a great convenience to a farmer to carry home hay thus prepared, stack it, and thresh it out at his leisure.

Meadow-hay, or, as it is termed in Renfrewshire, *bog-hay*, is collected in the high and poor districts from bogs or marshy grounds, on which no attempts at cultivation have ever been made. It is commonly cut about the end of July, and is often difficult to manage. The quantities of soft grass, sprits, rushes and aquatic plants, which abound in our

a The late Rev. John Warner, minister of Kilbarchan.

meadows, rendering the process for saving this kind of hay, in many instances, extremely troublesome and precarious.

SECTION IV.—FEEDING.

In a great part of Renfrewshire the dairy is an important object, and therefore the system of fattening, or feeding, live-stock, is not pursued to great extent. The cattle which are fattened on the pastures of this county, purchased either at fairs in Perthshire, Stirlingshire, Dumbartonshire, or from neighbouring farmers, are principally *cows*, and a very few bullocks. There are some, though not many, fields round gentlemens' seats stocked with sheep.

Nothing particular occurs on the subject of grazing worthy of observation. Judicious farmers consider it prudent to stock their lands moderately, which in this, as in every district equally extensive, are of various quality. Pastures are found in many parts of the county, which will graze an ox on an acre; while upon that, or even a greater, quantity of ground in other places, the most hardy domestic animal could not subsist.

CHAPTER IX.

GARDENS AND ORCHARDS.

ALTHOUGH in Clydesdale (the adjoining county) there are above 250 acres of land in orchards, the produce of which, in some years, amounts in value to upwards of £2000,[a] yet in Renfrewshire there are none, excepting upon a few steep banks of small extent at Port-Glasgow. The experiments which have been made *there*, shew, that the soil, climate, and exposure, are favourable for orchards.

Gardens.—In the vicinity of Paisley, Greenock and Port-Glasgow, there are considerable portions of land set apart for the culture of all sorts of vegetables. Good land near those towns lets, for this purpose, at from £10 to £15 per acre. But the highest rents for garden grounds are obtained at Greenock and Port-Glasgow. Four acres belonging to Sir John Shaw Stewart, within a mile of Port-Glasgow, inclosed with a thorn hedge, are let for £107 of yearly rent, and the tenant is doing extremely well. And five small gardens at Greenock, belonging to the same gentleman, inclosed with a

a See View of the agriculture of Clydesdale, p. 101.

stone wall about seven feet high, each of them about a quarter of an acre, well stocked with apple trees and gooseberry bushes, were let by public roup, in 1803, at £50 per acre of yearly rent. The ground at this high rent, was not taken indeed with a view to profit, but rather as a recreation to gentlemen and their families. However, two of those gardens are now subset to operative gardeners, who pay their rents from selling fruit and vegetables.

The noblemen and gentlemen, and many of the wealthy merchants and manufacturers in Renfrewshire, have excellent gardens, of considerable extent, extremely well cultivated, and stocked with all the varieties of fruits that are found throughout the kingdom. There are about fourteen or fifteen hot-houses and green-houses in the county, for forcing fruits, &c.

The farmers in general have gardens adjoining to their farm houses, sufficient to produce abundance of common kitchen vegetables: but their attention is not much directed to those little spots, nor are they sensible of the comfort and advantages which might be derived from them, were a greater variety of vegetables introduced. In general, the cultivation of the gardens of farmers and cottagers extends only to potatoes, cabbages and greens.

CHAPTER X.

WOODS AND PLANTATIONS.

THIS part of Scotland appears in former times to have abounded with woods, as may be gathered from ancient records, and from the names of numbers of places in the neighbourhood of the mosses in the low part of the county. The Forest of Paisley is mentioned in Ragman's Roll 1296: Durskath wood appears in the abbot's rental book, 1525, as in the vicinity of Paisley, and the tenant is taken bound to maintain the ditches around the wood: to this wood, or forest, of which no vestige now remains, the names of the adjoining lands, Woodside, Oakshaw,[a] &c. evidently bear reference. In other parts of the county we meet with names of similar import, as Linwood, Fullwood, Walkinshaw, Hanging-shaw, Birkenshaw, &c. The county is in many parts still well covered with woods and plantations.

The natural, or *copse*, woods are chiefly situated in the parishes of Paisley, Houston, and Eastwood. The last mentioned parish probably contains one half of the whole. They are cut every thirty years; and in 1795, such of them as were well

a *Shaw* is wood.

preserved, generally sold at from £25 to £30 per acre.[a] The quantity of copse-wood in the county may be near 500 acres; one cutting of which might be valued at that time at about £15,000, or, as they are cut periodically, at about £480 of yearly revenue. Their value has been gradually advancing during the last twenty-five years, in consequence of the great demand for alder and birch-wood for the numerous cotton mills; but, chiefly, in consequence of the rise of the price of oak-bark, which sold, about the year 1784, at only £5 per ton; in 1795 at £8 per ton; and now (1809) it brings £17. But the prices of wood and bark seem to be at present at their height; and at this advance, the revenue arising from periodical cuttings of copse-wood, may now be computed at £900 or £1000 per annum. The prevailing trees are birch, alder, ash, and oak. The woods are, in general, well preserved from the injury of cattle. Still they are very far inferior to the copsewoods in the neighbouring county of Dumbarton, where the vigorous growth of oak timber is so striking, that the periodical cuttings take place every twenty years. Greater care in draining, so as to encourage the growth of oak, and in thinning and clearing away hazels and other brushwood during the first years after cutting, and introducing oak plants, would be an improvement in the system of management.

Plantations.—The soil and climate are very fa-

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a The woods at Hawkhead, part of the east division of the county, were sold in 1652, by George Lord Rosse, to be cut in ten years, at 15,000 merks; equal to £833 6*s.* 8*d.*: a great sum at that early period.

vourable for forest trees; and numerous and extensive plantations are to be seen flourishing on the estates throughout the county. In some cases it had been the practice to plant the Scots fir alone, without any intermixture of other trees: at present, however, most proprietors, with more taste and foresight, have interspersed all the varieties of forest trees usually found in the kingdom. The plantations are, in general, well kept; additions to them are annually making; and there is reason to hope, that, hereafter, the naked and barren summits of the highest grounds, and such spots as cannot become the subject of culture, will be covered with thriving plantations. Mr M'Dowall, during the year 1793, besides other plantations, planted 89 Scots acres, called Skiff-park, in Lochwinnoch, in one field completely inclosed, with all the different varieties of trees, at the rate of 5000 trees to each acre; that land with the crop of trees, is now (1809) valued at £6000; and the whole plantations on that gentleman's estate have been estimated at above £30,000.

In planting forest trees, proprietors have, for a considerable time past, shown a very just predelection for the larix. This tree which was first planted in Renfrewshire about the year 1746, is extremely suitable to the climate. Some of them are now above 7 feet in circumference; and it is worthy of remark, that, fifteen years ago, in thinning some plantations at Castlesemple,[a] from twenty-nine to thirty-five years

a Statistical account of Lochwinnoch, vol. xv. p. 67.

old, each larch was sold at from 12*s.* to 22*s.* while the best of the other trees of the same plantation brought only 5*s.* each. As a Scots acre will contain 380 trees, planted at the distance of 4 yards, which is room enough for the growth of trees of considerable size, the valuable produce which may be obtained from a plantation of larches, may hence be easily calculated. It is unnecessary here to enumerate the properties, and the durable nature, of this timber: they are sufficiently known, and have been fully detailed by different authors.[a]

In consequence of the rises of the price of foreign timber for two years, plantations of Scots fir have brought considerable prices. One gentleman sold a plantation,[b] extending to 13 acres, the trees partly forty and partly sixty years old, at £100 per acre. Another gentleman, sold an inclosure[c] of 21 acres, containing trees thirty-six years old, at £70 per acre.

It may be of importance to preserve some record of the growth of trees of different kinds contained in the same plantation. In a plantation forty-nine years old,

Oak measured 37 }
Beech,.....42 } inches in circumference, at
Scots fir,.....46 } 3 feet from the ground;

and the total height, 52 feet.

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a See Essays on husbandry, by the Rev. Mr Harte, Essay 1, p. 146: also, Essays on agriculture, by D. James Anderson, vol. iii. p. 370; and Gerarde's Herbal, p 1182.

b Hillington.

c Ralston.

In an inclosure of 20 acres, planted in the east part of Renfrewshire, in 1777, some of the best of the trees measure, at 3 feet above the surface, as follow;

Larix,.....50 inches in circumference;
Beech,.....48;—
Plane,.....45;—
Scots fir,.....43;—
Oak,.....32;—
Ash,.....27;—
Birch,.....24;—
Spanish chesnut, 21:—

And the large inclosure already mentioned of 89 acres, called Skiff-park, planted in 1793, contains trees of the following dimensions, at 3 feet above the ground, in situations where they are well sheltered and the soil good:

Larix,.....33 inches in circumference;
Scots fir,....25;—
Birch,.....23;—
Alder,.....23;—
Elm,.....23;—
Beech,.....16;—
Spruce fir, 16.—

The most extensive *copse-woods* are found on the estate of Nether-Pollock, in the parish of Eastwood: the greatest extent of *plantations* is on the estate of Castlesemple, in the parish of Lochwinnoch: and the greatest quantity of *aged trees* is on the estate of Hawkhead, in the parish of Paisley; some of the growing timber, there, measured at 3 feet from the ground, is of the following dimensions:

Kind of trees.	Circumference.		Diameter.	
	Ft.	*In.*	*Ft.*	*In.*
1 Spanish chesnut,.....	9	10	8	1½
2 Beech,.....	9	7	3	0½
3 Plane, or Sycamore,...	9	3	2	11¼
4 Oak,.....	9	0	2	10½
5 Poplar,.....	8	6	2	8½
6 Ash,.....	8	3	2	7½
7 Elm, Scots,.....	7	8	2	5¼
8 Willow,.....	7	6	2	4¾
9 Lime,.....	6	9	2	1¾
10 Larix,.....	6	5	2	0½
11 Gean, or wild-cherry,	6	0	1	11
12 Birch,.....	5	1	1	7½

A few *pheasants* have lately been turned out in the woods and plantations of this county: they have already increased in number, and, if they are left undisturbed, it is hoped they may soon abound in this district.

CHAPTER XI.

WASTES, COMMONS AND MOSSES.

LANDS which are *unappropriated* may be, strictly speaking, called *wastes*, but there is nothing of this description in Renfrewshire. There are, however, extensive tracts of moss ground lying in a neglected state, and very properly denominated wastes. These are situated, as we have already stated, in the flat, and in the highest district of the county. In the former there are 1550 acres, in the latter a far greater extent. The mode of improving them shall be afterwards noticed.

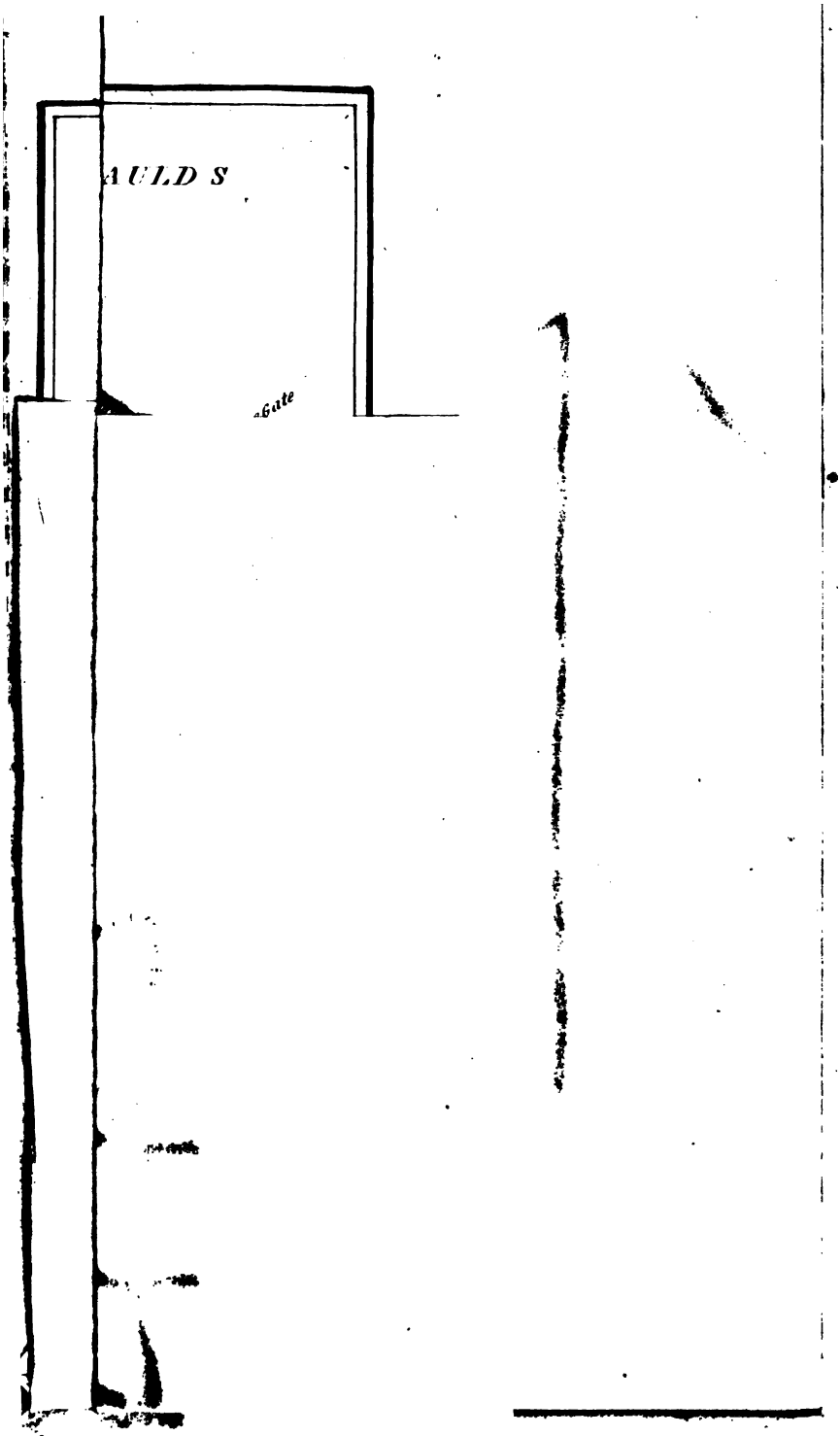
A few years ago, there were more than 11,000 Scots acres, that is 13,800 English acres, or, about one-eleventh-part of the whole area of this county, held in common; but some of the most valuable of those commons have been judiciously divided, to the satisfaction of the owners, and to the great improvement of the county, under the act 1665, which is a most important Scottish statute. The words of the statute are; "All commons, ex-"cepting those belonging to the King in property, "or royal burghs in burgage, *may be divided at* "*the instance of any individual* having interest, by "summons raised against all persons concerned be-

"fore the Lords of session, who are impowered to "discuss the relevancy, to determine upon the "rights of the parties concerned, to divide the "same among them, and to grant permission for "perambulating and taking all other necessary proba-"tion, to be reported to the Lords, and the process "to be ultimately determined by them; declaring that "the interest of the heritors having right in the "common, shall be estimated according to the *valu-"ation* of their respective lands and properties "(having right to that common), and that a portion "be adjudged to each adjacent heritor in propor-"tion to his property; with power to the Lords to "divide the mosses, if any be in the common, a-"among the parties having interest; or, in case they "cannot be divided, that they remain in common "with free ish and entry."

The moss of Paisley, which in the year 1719, contained 234 Scots, or 295 English acres, held in common by five heritors and the town of Paisley, was divided, at that period, under the direction and authority of Sir John Maxwell, Lord Pollock, one of the senators of the college of justice. The principle upon which the division took place, was, that the area should be divided in proportion to the length of front, or part of the circumference, belonging to each heritor.

One of the most valuable commons, called the Commonty of Mearns, or *Mearns' moor*, consisting of 1054 Scots acres, exclusive of roads and lakes, was divded, in 1799, into twenty-eight allotments. Various attempts had been made, from the year

1756, to divide this valuable property; but there were difficulties in ascertaining the state of interests; and, as there were forty-six claimants, (three of whom had acquired interest in this moor in consequence of managing and upholding the marches) it was not easy to reconcile the whole of them to this beneficial measure. The first step was, to make up a state of interests, which was accurately done by Mr Hill, factor on the estate of Upper Pollock; next, to get plans of the common, and ascertain its value; and lastly to make up a scheme of division. This was all effected in 1798 and 1799, in terms of the act 1665; and the scheme of division being reported to the court of session, was approved of, and held as the rule by which the heritors now occupy that property. Some of the heritors having sold their shares in the common to their neighbours, and others having classed themselves together, the division was facilitated, and the lots reduced to twenty-eight instead of forty-six. The various allotments were delineated on the map of the common, a copperplate engraving of which was afterwards executed, specifying all the lines of division, and the area of each property. The whole expense of procedure in accomplishing the division of this valuable property was about £400. The lakes called Black-loch and Brother-loch, extending to 86 acres, remain undivided property, and afford a rent of £62 as reservoirs for the mills &c. on the stream at Thornly-bank, and on the White-Cart. Since the division, the lots have been inclosed and subdivided, a few buildings erected, and the value of the land has greatly increased.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Another extensive common, called Leap-moor, in he parish of Innerkip, extending to 2086 acres, was, in 1807, in consequence of a remit from the court of session, divided among six heritors, in proportion to their valued rents. Certain portions, on the edge of this moor, had been possessed by some of the heritors for more than forty years. These, extending to 111 acres, were, in the first place, deducted and set aside to the respective occupiers, and the remaining 1975 were then divided among the owners, in the proportions following: viz.

	Acres.
Sir John Shaw Stewart of Ardgowan,	1755
Robert Wallace of Kelly,	98
Robert M'Fie of Langhouse,	82
Michael Hyndman of Lunderston,	20
John Allison, there,	10
Robert Jamieson, there,	10
	1975

The expense of obtaining this division was about £300.

The moss of Blackstown, extending to 654 acres, was divided, in 1808, by Adam Rolland Esq. advocate, as arbiter for the four proprietors, in the following proportions:

	Acres.
To John Cunningham Esq. of Craigends,	172¼
Archibald Speirs Esq. of Elderslie,	125
Col. Napier of Blackstown,	315¼
Cochran Esq. of Clippens,	41¼
	654

SECTION II.—PARING AND BURNING.

This is not practised in Renfrewshire. Burning the surface, is indeed had recourse to in the mosses and moors. In the former case, this process is employed in order to destroy the moss, and reclaim the land, by mixing what ashes and moss may remain with the subsoil. In burning moors, the object is to encourage grass by destroying the heath. Both practices are rather pernicious than beneficial.

SECTION III.—MANURING.

The manures made use of are, lime and dung; no marle having been discovered in this county. Till of late, very little attention was paid to the making of compost dung hills. In the few instances where these composts have been applied as a dressing to grass, very beneficial effects have been experienced, both upon the pasture and the succeeding corn crops.

Lime was sold in 1795 at 10*s.*, and is now at 16*s.*, per chalder of 16 bolls; the boll containing from 4 to 5 Winchester bushels of slacked lime. The quantity applied is commonly 6, 7, or 8 chalders per acre; there are instances, however, of applying 10 chalders, which is, nearly, at the rate of 720 Winchester bushels. Considerable quantities are

by the heritors in the barony of Glen, twenty-three in number, according to their respective valuations. It contains 2130 Scots acres; and, at present, is probably worth not more than one shilling per acre of yearly rent. The marches on the confines of Ayrshire are not distinctly ascertained, so that 330 acres of this moor are disputed, and doubts entertained to what county, what parish, and what heritors these belong. The *old extent*, or oldest valuation, affords a pretty accurate view of the proportions of the moor of Mistylaw belonging to each heritor. According to this rule, Mr M'Dowall held about one-third, which was lately sold at about £800.

The only other undivided property in the county is *Duchal-moor*, containing 4155 Scots acres, situated in the parish of Kilmalcolm. The whole of this extensive moor appears to have anciently belonged to Alexander Porterfield Esq. of Porterfield, as proprietor of the estate of Duchal; but there are at present, eight heritors who claim interest along with him on this common, either from their title deeds, or in consequence of uninterrupted possession for a long period. All of them claim peats for fuel, and the right of grazing sheep, cattle and horses. The following is a pretty correct state of the heritors and their respective claims:

	Sheep.	Queys.	Horses.
Charles Cunningham Esq. of Cairncurran, for his lands of Netherton, Bridgeflat and half of Ladymuir, claims right to graze.....	380	18	2
Mr Blair, for the remaining half of Ladymuir, claims.....	240	18	2
Mr Graham of Craigbait, claims.....	40	6	1
The three proprietors of Newton, Killochries and Pomillan *have right* to graze.....	215	23	5
And the two small feuars of Caldside and Chapel have right to peats for fuel.			

Mr Porterfield has *by far the greatest interest* in this common; and having commenced a process of division in 1799, an act and commission from the court of session, was granted to the Sheriff substitute of this county, to take a proof and proceed with the division; and on the 26th of June 1802 a renewed act and commission was granted to the Sheriff depute and another gentleman, jointly or separately: but the state of interests is not yet fully ascertained, and the division is now referred to David Cathcart Esq. and Duncan M'Farlane Esq. advocates.

Run-rig.—It may not be improper to mention, that, though anciently, there were in this county several instances of small intermixed allotments of land lying in narrow stripes called *Run-rig*, they are now, in every instance, abolished, excepting in

the lands belonging to the royal burgh of Renfrew. About 50 burgh acres of rich arable land remain in that aukward situation on the south-west side of that town. No division is at present proposed. They are parcelled out into lots of from half an acre to two acres; are about half a mile long; and are the property of forty owners, each of them occupying his own narrow stripe. When any transference takes place, they sell, at present, notwithstanding the absurd situation in which they remain, at £140 per acre. By following out measures similar to the act 1695. c. 23. this small property might be much improved: but that act of parliament does not apply to burgh lands.

CHAPTER XII.

IMPROVEMENTS.

SECTION I.—DRAINING.

SOME attention is paid to draining; and in general it would be of great advantage to the county that much more pains and expense were bestowed on this important object. The *kinds* of drains are, commonly, either narrow open-casts; or narrow casts, about 2 feet deep, filled with small stones. Sometimes, in soft land, they are made about 3 feet in depth, 2½ feet in breadth, sloping to one foot at bottom; they are kept open by thin stones leaning on one another, and are covered with smaller stones, till within a foot of the furface; when the whole is laid over with straw and earth. A kind of drain is executed on the *flat carse* grounds, which is extremely useful. Open drains, called *sloped gaws*, are cut, at right angles to the ridges, from the middle of the field to one or both sides of the inclosure. The width of these *sloped gaws*, or drains, is from 12 to 24 feet, as the declivity requires. These are sometimes adopted when the field is in grass, but more frequently when in summer fallow. The earth taken from these sloping drains, is either

made into compost dunghills, or thrown into the hollow parts of the field.

The detail of Mr Elkington's method of draining is given in several agricultural reports. It consists chiefly in making holes with a boring angur, so as to tap the springs and let out as much water as possible into ditches or trenches previously formed, for carrying off the springs which may issue in consequence of this operation. Since his method was made public, the plan has been pursued in this county, particularly at Caldwell, with perfect success.

The most extensive *drainage* in the county, for recovering lands exposed to floods or lying under water, was executed, about the year 1774, by Mr M'Dowall of Castlesemple, by deepening the Black-Cart, at an expense of near £3000. Forming that river into a deep canal for near two miles, the surface of the water in Castlesemple-loch was lowered, and considerable quantities of land were acquired along the edge of that lake, and at its western extremity. These consisted of lands called Barr and Peel meadows, extending to 250 acres of soft spungy soil, abounding with aquatic plants, and producing very coarse hay of little value. Improvements are now projected so as to obtain the full benefit of this *drainage;* first, by conveying the water which falls on the adjoining lands into proper channels, and thus preventing it from overspreading the flat surface of those meadows; and next by the formation of embankments; so that it is hoped those meadows may soon be rendered fit for cultivation.

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brought from Kilbride in Lanarkshire, for the south-east parts of the county; and from the parishes of Kilbirnie and Beith in Ayrshire, for the south-west parts; but the chief lime-works are in the parishes of Cathcart, Lochwinnoch and Paisley. In some of the best cultivated parts of the county, the farmers convey lime from the Earl of Glasgow's lime-works at Hurlet, to the distance of 10 or 12 miles; and some small quantities are occasionally carried into Dumbartonshire across the Clyde, by Renfrew ferry. A few farmers on the banks of that river, obtain lime by the great canal, from Campsie and Netherwood; and limestones are sometimes imported from the island of Arran and from quarries on the banks of the Crinan canal. We have already stated,[a] that, from the lime-works within the county, there are sold annually about 12,000 chalders, some part of which is used for building, plaistering, &c. but by far the greatest part as manure. When the quantities of lime brought from other counties is taken into view, it is probable there is at least £12,000 worth of lime annually applied as manure, exclusive of the expense of carriage.

The most common methods in this county of applying lime as a manure, are to spread it either on pasture grounds, from six to twelve months before breaking up; or upon summer fallow. In some instances, both in this county and in Dumbartonshire, it is applied to *potatoes* in considerable quantity, by sprinkling it out of carts on the pota-

[a] Page 24.

toe drills, in the end of June or beginning of July, after the crop has made considerable progress. In the course of hoeing the field, the lime is incorporated or intimately mixed with the soil, producing always most beneficial effects. It is also very frequently applied to moss lands, as shall be afterwards noticed.

Dung is used when summer fallow is attempted. Sometimes it is applied, and with success, to grass grounds, but more generally to barley and potatoe crops. The quantity used is about 40 carts per acre. The contents of the cart, within the edges, are from 30 to 36 cubic feet. Dung is collected at Paisley, Glasgow, Greenock, and Port-Glasgow. From the harbours of the two latter towns, a considerable quantity of manure is obtained, which is conveyed up the Clyde, both to the counties of Dumbarton and Renfrew. At Glasgow and Paisley, in 1795, the common price of dung, consisting of coal ashes and sweepings of streets, was from 1*s.* 4*d.* to 2*s.* per cart, heaped on the top, and drawn by one horse; but it is now from 4*s.* to 6*s.* per cart. The manure is not carted directly from the towns to the farms, but is laid down in heaps, in the neighbourhood of the town, whence it is conveyed to the country in smaller loads. The price at Glasgow is, generally, lower than at Paisley, of course it is brought from Glasgow to the distance of 6 or 7 miles; but it is very seldom conveyed from Paisley above 4 or 5 miles.

Woollen-rags, soaper's-waste, soot and shavings of horn, are applied as manure, but not extensively,

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certainly be more œconomical than dung from the great towns of this county. Although the line of sea coast in this county from Port-Glasgow to Kelly-bridge, on the boundary with Ayrshire, extends to 13 miles, yet the quantity of sea weed is so inconsiderable, that it is seldom collected and applied as a manure.

SECTION IV.—WEEDING.

The farmers pay attention to weeding, removing couch grass and thistles from their corns: their potatoe crops also are thoroughly cleaned, but no care is taken to exterminate weeds, or to prevent them from spreading. It is lamentable to notice thistles and other pernicious weeds accumulated on the sides of both public and private roads, and on the banks of ditches, ripening their seeds, and sowing themselves in the fields of careful and industrious farmers. Very slight attention would remedy this, and prevent the adjoining well cultivated lands from being infested with noxious weeds.

Some of the prevailing weeds in *meadows* and *grass lands* are, crow-foot, or crow-toe, *(ranunculus acris)* ox-eye, or large white gowan, *(chrysanthemum leucanthemum)* and rag-wort, or bind-weed, *(senecio jacobea.)* No pains are bestowed in clearing the grass grounds either of these or of any other weeds. The last abounds in the richest and driest pastures; and is a well known indication of the

goodness of the land. Sheep eat it while young, and, of course, where that kind of stock is fully introduced, this plant scarcely exists. In cases where the lands are not pastured with sheep, it might be pulled up by the root, or cut with a scythe before the seeds ripen, but the former method is preferable.

The weeds which abound in *corn fields*, are; 1. thistles; 2. wild-mustard, or skillocks, *(sinapis arvensis)*; 3. couch grass, or felt, *(triticum repens)*; and 4. corn marigold, or gule, *(chrysanthemum segetum)*. In weeding, the first of these is pulled out with the hand, or with a simple instrument, well known in this and all the neighbouring counties, called *clips*. The second abounds where the lands have been plentifully manured with dung from the great towns. The third is in some degree exterminated by fallowing and frequent harrowing; is gathered into heaps and burnt; or sometimes collected in quantity and the mass rotted, and formed into good compost. The fourth and last of these weeds, the corn marigold or *gule*, is most discernible when the crop is weak and scanty. Some leases, particularly on the estate of Duchal, contained clauses to keep the lands free of gule; but those obligations were seldom enforced by the proprietor. This appears to have been an object of attention at very early periods. In the rental book of the abbacy of Paisley, there are the following words in their acts and statutes: "He "that fyles his mailen with gule, and cleans it not "by Lammas, shall pay a merk without mercy, "and afterward the land being found foul, that the "goods shall be escheat."

SECTION V.—WATERING.

No fields in the county are *artificially watered;* many of them, however, are capable of that improvement. The fields in the neighbourhood of Auldhouse, in the parish of Eastwood; many acres lying along the banks of the Levern and Brock; and several fields in Houston parish, may be particularly mentioned as suited for this operation. The lands on the sides of the high grounds, by conveying, in proper directions, the little streams that issue from them, are also often capable of *watering.* In many parts, especially of the middle district, are to be found beautiful flat holms of small extent, the soil of which is of a mellow loamy nature, and of great fertility. These too often are treated in the same manner as the adjacent grounds, notwithstanding their different qualities. In several places they might be converted into perpetual hay meadows; and, as streams of water run frequently through them, and springs often burst out towards the bottom of the surrounding eminences, which, left to themselves, tend only to disfigure and destroy, artificial watering might, probably, be attempted with small difficulty, and with the prospect of improvement. At the same time it must be allowed, that, in a manufacturing county like this, where almost every rivulet is of importance to manufactures, any agricultural operations which might tend

to injure the purity, or diminish the quantity, of water, would probably meet with opposition.

SECTION VI.—MOSSES.

To reclaim the many parts of this county which consist of deep moss, and particularly the mosses in the low and fertile district, extending to 1900 English acres, is an attempt of great importance. A method has been pursued, both here and in Ayrshire, upon similar lands, which has been productive of good effects. As it originated in Ayrshire, it will probably receive larger notice in the survey of that county, but it may here be shortly stated.

The mossy land is first dug over, which costs generally from £2 to £3 per acre; then in summer, or in frosty weather, when it is so bound as to bear the tread of cattle, from 5 to 8 chalders of lime are sprinkled on the surface: oats are then sown, and hoed, or harrowed in with light wooden-toothed harrows, drawn by one or two men. This method is repeated for two, three, or four years, without any alteration, but the omission of the lime. By degrees the land consolidates, and, after being thrown into grass, produces an herbage where nothing grew before but heath.

Great care and pains are also bestowed in laying the land dry by open-casts, drawn in such a manner as to carry off the stagnated water.

Another scheme is, to apply both lime and dung,

and to take a crop of potatoes and afterwards oats. The crop of potatoes is generally pretty good, and found to be an excellent preparation for the succeeding crops of oats.

When both dung and lime are applied, the putrid fermentation is speedier; and its effects are apparent in the great abundance of the corn crops.

The common method of reclaiming mosses in the county of Renfrew, and in many other parts of Scotland, has been, by digging away a great portion of the moss, and consuming it, as fuel, by the families in the neighbourhood. What remains is *burnt*, and gradually incorporated with the subsoil by repeated digging, manuring, cropping, &c. This method is, evidently, very tedious, and, compared with the scheme now pursued, must be accounted pernicious, especially if the subsoil is of bad quality. The progress of reclaiming mosses in Renfrewshire by burning, has, upon the whole, been very slow.

Great advances have been made by Mr Fulton, proprietor of the estate of Lochliboside and Hartfield, in the parishes of Neilston and Paisley, in the high part of this county, in improving mosses according to the Ayrshire method, within these sixteen years; and very considerable portions of land, which were formerly rented at 1*s.* 3*d.* or 1*s.* 6*d.* per acre, are now let at 20*s.* and some parts at 30*s.* per acre. Five hundred acres of the moss and muir of Hartfield, formerly rented at £30, are now, in consequence of these improvements, let at £495: and out of 675 acres of very deep and soft moss, 450 acres have been reclaimed; large portions of which, if the

same judicious manner is persevered in, will continue to be susceptible of cultivation by the plough.

The improvements on the mosses in the lowest district have been hitherto on a small scale. Nearly the whole of *Paisley moss*, however, which in 1793 contained 130 acres,[a] is now improved and well cultivated: and Mr Alexander of Southbar has lately built a few cottages in his mosses; and the fixed settlers will very soon make progress in extending good cultivation around their dwellings.

SECTION VII.—EMBANKMENTS.

There is not much land on the banks of the rivers of this county exposed to inundation, and therefore extensive embankments are not necessary. Some valuable land, called *Long-haugh*, belonging to Lord Blantyre, situated on the Clyde, opposite Dunglass castle, much exposed to the floods and tides of that river, was effectually defended in 1798, by an embankment which cost only £300, and is a lasting and beneficial improvement. A similar embankment has been proposed on the adjoining lands of Bishopton, where it is practicable to reclaim, at least, 100 acres from the river Clyde: but to do this effectually would require great expense, because the land is very low; and the force of the tides, at this part of the river, during westerly winds, very

a Statistical account, vol. vii. p. 75.

violent. The operations in improving the navigation of the river will facilitate this undertaking: for the natural tendency, and uniform effect of the jettees and parallel dykes, as already mentioned,[a] are to accumulate land and form embankments on the brink of the river.

The lands called Barr and Peel meadows, in the parish of Lochwinnoch, already mentioned, extend to 250 acres, and embankments have been projected to defend these flat lands from inundation. The expense must necessarily be of great amount; but it is certainly practicable to embank them, and it would be a most important improvement.

There are no other embankments in the county which require particular notice.

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a See page 33.

CHAPTER XIII.

LIVE STOCK.

SECTION I.—CATTLE.

THROUGH all this county the dairy is of great importance; in the upper district it is the chief object of the farmer's attention. About Mearns, Eaglesham, Neilston, and Lochwinnoch, it is pursued with great success, and, of course, considerable attention has been paid to the breed of cattle. The milk cows, not only in those parishes, but through the whole of the county, and in considerable portions of the counties of Air, Lanark, and Dumbarton, are of a valuable breed. They are in general of a brown colour, or brown with spots of white; the head little; the ears and horns small; the horns curved inward; and the neck short. The weight is commonly from 20 to 25 stones trone; that is from 4 to 5 cwt. Their produce is sent chiefly to Glasgow, Paisley and Greenock, in butter and butter-milk. In places more remote from large towns, the milk is made into cheese of excellent quality, which meets with a very ready sale in all parts of Scotland, under the name of Dunlop cheese. But there are at present few *cheese dairies* in the county.

The Alderney breed of cows was introduced at Hawkhead in 1780, and has been since crossed with the Dutch breed, and the common breed of the country. They yield richer cream, but a less quantity of milk; the farmers therefore prefer the common breed, which they have been gradually and successfully improving. A practice prevails in some parts of this county, of letting cows for the whole season. The owners of the cows provide them with good pasture, and the persons who hire them pay a sum of money for each cow during the year. In the year 1795, the rate was £6 or £7 for each cow; the present rate is £13 or £14. A good cow produces from 10 to 12 Scots pints per day; that is, from $4\frac{1}{2}$ to $5\frac{1}{2}$ gallons, wine measure, during the prime of the season. But the *average* quantity may be stated at 7 Scots pints, or $3\frac{1}{8}$ gallons, wine measure, per day, for six months in the year. The average quantity of butter may be stated at 3 lbs. trone weight (of $22\frac{1}{2}$ oz.) or $4\frac{1}{4}$ English pounds per week, for six months.

The cows are fed in the house through winter, but are generally allowed to go out for a few hours in the forenoon. The practice of keeping the cattle constantly in the house through winter is gaining ground, for the sake of the manure and to prevent poaching. During the winter months their food is oat-straw, with a small allowance of potatoes, boiled with chaff or chopped straw. As the calving season approaches their food is improved; hay is substituted for straw; the quantity of potatoes is increased; weak grain, meal seeds and dust; and on some

farms beans, broken in the mill, are added to the boiled meat: the farmers now generally finding it to be much for their interest to keep their cattle in good condition. In summer they are pastured on fields sown down with perrenial rye-grass and white clover.

Butter is made always from milk; seldom or never from cream; and, in this county, particularly in the parish of Mearns, it is distinguished for its excellence, the cleanliness with which it is made, and the length of time during which it continues sweet. The dairy seems at all times, to have been an important object in Renfrewshire. Crawford, who wrote his history a century ago, says, "The high-"er parts of the county abound with grass and "choice pasturage, where there is made excellent "butter and cheese, and besides what is made use of "in the county, there are considerable quantities "carried to the neighbouring shires." And the rents of the extensive property in Lochwinnoch parish, which belonged to the abbey of Paisley were paid in *stirks* and *cheese*.

The following table exhibits the prices of stock for the dairy:

The price of a calf for rearing, from	£ 1 to £ 1 5*s*.
A year old calf or quey,	£ 3 to £ 5
A two year old,	£ 8 to £10
A three year old,	£12 to £15
A bull,	£10 to £15
A cow in its prime,	£15 to £21

At least four-fifths of the calves in Renfrewshire are sold to butchers as soon as they are dropped; and the price is about 10*s.* a head. Those who rear, generally do so from their own stock, and very few calves, or year-olds, are sold for rearing. A two year old quey or young cow, generally produces a calf in the month of June or July, though at the age of only 24 or 25 months.

Notwithstanding the attention paid to the dairy, a sufficient number of young cows are not reared. These are frequently purchased from neighbouring counties. It may be observed, that there is seldom much regard paid to the selection of a proper bull; and the calves are too often sold to the butcher. Were the farmers to attend to the choice of the best bulls; and to rear up the calves of those cows which, from experience, they know to be best, they would still farther improve their stock, and save all the trouble, loss and disappointment which often attend the uncertainty of a market.

A few cattle are occasionally fed for the market on the pastures round gentlemen's seats. At the distilleries in the parishes of Inchinnan and Paisley, a number of oxen were fattened for the Paisley, Greenock, and Glasgow markets; but neither this nor feeding with turnip, is prosecuted to the extent that it formerly was. In 1794, one extensive proprietor, (Mr M'Dowall) who occupied some hundred acres of his estate, had fifty-two bullocks fattened on turnips, of which he had an excellent crop on a field of 27 acres; for some years he continued the same plan, but having thrown his lands

into pasture, the scheme of feeding with turnip was discontinued.

A *few calves* are fattened, in places remote from large towns, early in spring, and when fed for nine or ten weeks they sell for about £5.

SECTION II.—SHEEP.

Few farms are stocked with sheep; and, as no great attention is paid to the breed, great room, it is to be presumed, remains for improvement in this branch of husbandry. A very few farmers in the higher grounds of Innerkip, Kilmalcolm, Eaglesham and Neilston, where there are extensive dry hills well adapted for rearing and feeding, have small flocks of the black faced or Highland species: but there have been no attempts to rear sheep on any other parts of the county. For a very few years, Mr John Smith from Roxbroughshire, farmer at Millbank, in Erskine parish, has fed annually about 300 or 400 Highland sheep on his turnip fields, by using *sheep-nets* for folding, according to the Berwickshire method.

It is greatly to be wished, that some trials were made of the Dishly or Leicestershire breed, now so frequent on the arable lands in England, and long ago introduced, with much advantage, in Roxbroughshire, and Berwickshire, where landed proprietors and farmers, have given the most systematic attention to the improvement of this valuable breed of sheep,

In Berwickshire, it is believed that, no other known breed could be nearly so profitable to the farmer. "The point of improvement to which the best "flocks are brought, in that county, is extremely "obvious, even to very inexperienced observation, "by the handsome compact mould of their bodies, "the excellence and abundance of their wool, their "quiet domesticated disposition, their aptitude to "become fat at an early age, and the small quantity "of their offal when killed."[a] This species might certainly thrive on some of the rich grass grounds in the lower part, or on the fine natural pastures in the higher district of this county.[b]

The only new breed introduced into Renfrewshire has been recent. Col. Downie of Paisley, then in Spain, sent into this kingdom, at midsummer 1810, 1000 or 1200 *pure Merino sheep*, about one half of which were landed in this county. They were kept on dry sound pasture, on the farm of Brownside near Paisley, and at Millbank or Park of Erskine, under the care of four Spanish shepherds, who brought along with them the large sheep dogs, necessary in Spain to protect the flocks from the attacks of wolves. These sheep were certified to be of the true Paular breed, from the flock of the Prince of the Peace. The rams are all horned, the ewes polled, and their feet and head are as clean and free of wool, as the Highland and the Cheviot sheep, to which breed the ewes have a resemblance;

a Kerr's View of the agriculture of Berwick, p. 393.
b See pages 65, 68, 108.

only they have on the forehead a small circular tuft of wool.

On the 15th of August 1810, Sir John Sinclair inspected Mr Downie's flock of Merino sheep, kept at Brownside near Paisley, and afterwards drew up a communication regarding them, to the board of agriculture, in the following words:

"The sheep in question left Lisbon on the 10th "of July 1810, and they were landed at Port-Glas-"gow on the 6th of August following. During the "voyage fourteen rams and four ewes died: but on "board of another ship, having also a cargo of sheep, "which sailed from Lisbon at the same time, and "reached Port-Glasgow six days sooner, only eight "rams and four ewes died; the vessel being larger "and the sheep having more air. Since they landed, "up to the 21st August, twelve rams and five ewes "of both cargoes have died, and about seven more "of both flocks are likely to follow them. During "the voyage, they were fed on barley and hay; "and care was taken to keep the water put on "board for them at Lisbon, as fresh as possible. "The best time to import Merino sheep into this "country is, when the weather is the most likely to "be dry and warm, on their arrival here; and they "ought to be brought over in large ships, affording "them room and air.

"The ram, in a good season, will produce about "twelve pounds of wool; the ewe, having had a "lamb, about five pounds; having had no lamb, "about seven pounds: the wedder about nine or ten "pounds. The wool was formerly worth only about

"two shillings per pound; but of late years the "price has doubled. The sheep are fed on the "mountains of Estremadura in winter, and on those "of Leon in summer. Those imported by Mr Dow-"nie are of the Paular breed, which formerly be-"longed to the Prince of the Peace, or Godoy. The "reason of their change of pasture is, to avoid the "excessive heat of the south of Spain in summer, "and the cold of the northern mountains in winter. "This change of climate preserves, it is believed, "the health of the sheep, and, consequently, the "fineness of the wool.

"In Spain, there are many rams without horns, "and they could as readily be got over as the horn-"ed. The Spanish shepherds, who attend Mr "Downie's sheep, have seen flocks of rams without "horns; and think that they are in every respect "equal to those having horns.

"The diseases to which the Merino sheep are "chiefly subject are, 1. what in Spanish is called *La* "*Rona;* a disease on the skin; and 2. what the "Spaniards call *Convalencia;* which appears in a "tumour, or swelling under the chin. This is caus-"ed by bad grass, or bad water, or by feeding at "night, which is reckoned a very bad practice. "This disease is incurable. The specific cure for "the Rona is the *black oil*, a substitute for which, "is water in which tobacco has been boiled. The "Merino sheep are also liable to the *foot rot.* It is "caused by the sheep feeding or sleeping on wet or "damp ground. The remedy is the same, black "oil, which is called in Spanish *Miera.* It is ex-

" tracted, the shepherds know not how, from a tree
" called *anevro*, which, from their account of it,
" seems to be a species of fir. The oil may proba-
" bly be procured from Cadiz, although at some
" distance from the sheep country. The shepherds
" do not know whether it be used for any other pur-
" pose, but for the diseases of sheep.

" The Spanish shepherds, as far as they can
" judge, are of opinion, that the Merino sheep,
" under a careful and intelligent shepherd, would
" thrive in Scotland. By an *intelligent* shepherd,
" they mean one who is acquainted with the various
" diseases to which the Merinos are subject, and with
" the cure of those diseases; and who also knows
" the proper pasture, which should be dry, consist-
" ing of natural, rather than of sown grasses, and
" free from noxious herbs. By a *careful* shepherd,
" they mean one, who not only leads the sheep to a
" proper pasture, *but who every day examines them*
" *one by one*, and is thereby enabled to arrest, in
" its beginning, any of the diseases to which they
" are subject: he must also pay the most assiduous
" attention to his flock, both night and day, during
" the time the ewes are lambing. With no more
" care than what is bestowed on sheep in the west of
" Scotland, they apprehend that many of the Meri-
" nos would die before Christmas.

" In dry hot weather, salt is given to the Spanish
" sheep. It is given well pounded, and sprinkled
" on the plain surface of some stones, which the
" sheep lick with their tongues. It serves to
" strengthen and fatten them. In Spain the rams

"are put to the ewes in the month of July,—ten or "twelve ewes to a ram. If a shepherd has under "his care one hundred rams, and as many ewes, "he selects about ten of the best of the former, and "allows them to be with the latter for a month or so.

"The shepherds spoke highly of the Spanish mut-"ton, and said, though not so fat, it was higher "flavoured than any they had seen in Scotland."

In the autumn, Mr Downie sold by auction about 200 ewes and about 50 rams, at two sales, and obtained, at an average, about £10 for each ewe, and about £15 for each ram. Some of the best rams of the flock were sold at twenty-six guineas, and some of the finest ewes brought £18. As this flock was sold in small lots, they are spread over the country, and it is hoped will thrive in Scotland, either in their original state, or by being judiciously crossed with other breeds. Among the purchasers were, the Duke of Hamilton, the Earl of Eglinton, Lord Blantyre, Lord Hyndford, Lord Dundas, Lord Montgomerie, the Honourable Mr Burrell, General Graham of Balgown, Mr Erskine of Mar, Mr Buchanan of Auchintorlie, Mr Hamilton of Dalziel, and many other gentlemen of this and neighbouring counties, so that in consequence of these sales, this breed is retained in Renfrewshire, and diffused over the counties of Ayr, Lanark, Dumbarton, Perth, Stirling and Clackmannan.

Mr Downie has still a part of his flock on the lands of Millbank or Park of Erskine, under the care of one of the Spanish shepherds, consisting of 5 rams, 43 ewes and 34 lambs. The diseases men-

tioned in the foregoing communication, by the president of the board of agriculture, particularly the *foot rot*, which is cured by British oil, an article which seems to be an extract from tar or from some resinous tree,[a] continued to prevail during the winter, which was uncommonly wet and stormy, and several rams and a very few ewes died: but the flock seems to prosper, and among the lambs, which are healthy, there have been very few deaths. The sheep were kept in the night in a good covered shed during winter, and their food was small quantities of hay and barley. The Spanish shepherd was particularly careful of the ewes and lambs: the lambs were dropped very early in the season, and consequently required much attention.

About seventeen years ago, a few of the *Cashmire-goat*, were brought into this county from India, by the Honourable Charles Stewart, and continued for some time on the parks at Erskine-house; producing wool of a very fine silky quality, fit for the richest fabrics: but they were subject to the disease called the *foot rot*, and died in a few years. Now that the Merino sheep are spread over this part of the country, it is not probable that they will be so soon exterminated. If happily that or any other breed producing fine wool shall prevail, a new direction may thus be given to the industry of the inhabitants of this part of Scotland. The great towns would afford a ready and good market for their carcases,

a This article, called Betton's British oil, may be found in most of the druggist shops in the neighbouring great towns.

and perhaps for their fleeces. The fine wool of our own country, may at some future period, afford a new subject for the skill and genius of the enterprizing manufacturers of Glasgow and Paisley, where fabrics from the loom have been varied as taste or fashion might direct.

SECTION III.—HORSES.

Great attention is paid to draught horses, though very few are bred in the county. They are, generally, purchased from Lanarkshire and Ayrshire, but chiefly from the former, and are mostly of the Carnwath breed. The account which is given of the origin of this valuable and much esteemed breed, is as follows:

"It is said that one of the ancestors of the Duke "of Hamilton brought with him to Scotland six "coach-horses, originally from *Flanders*, and sent "them to Strathaven, the castle of which was at "that time habitable. The horses were all stallions, "of a black colour, and remarkably handsome. "The farmers in the neighbourhood, readily em-"bracing the favourable opportunity, crossed the "foreign breed with the common Scots kind, and "thereby procured a breed superior to either."[a] This breed has been uniformly improving, especially

a Ure's History of Rutherglen, p. 50; and Naismith's Agricultural account of Clydesdale.

in size and weight. The most valuable of these draught-horses sold, about fifteen years ago, at from 30 to 40 guineas, they now bring 50 or 60. A pair of such horses are capable of ploughing a Scots acre per day: when employed in carting, a single horse commonly draws a ton; where the roads are good, 1½ ton; and, in some instances, 2 tons, exclusive of the weight of the cart. The draught-horses employed in bringing coals from Glasgow to Paisley, a distance of 7 miles, generally draw 24 cwt. Many of this valuable breed of horses are sold to farmers, in East Lothian, Berwickshire, Roxbroughshire, and the north of England.

The *mode of feeding* is the same as in neighbouring counties. Farmers feed their horses in winter and spring, on oats and oat-straw; and in summer and autumn, on pasture and cut grass: and the horses belonging to carters and carriers are fed on hay, oats and beans, during the whole of the year.

Oxen are not used either for the plough or the cart; and the comparative advantage of employing oxen and horses in husbandry has not been accurately ascertained. The use of the ox in the plough has been long abandoned; and, as the farms are small, it is probable it will not be resumed.

SECTION IV.—HOGS, POULTRY, &c.

Pigs are not generally reared in Renfrewshire: some farmers and cottagers indeed have been in use

to keep a few; and, about twelve or fifteen years ago, a considerable number was fed at an establishment for manufacturing starch, three miles west from Paisley: but that manufacture has been discontinued, consequently the rearing of pigs is given up; and, though there is not, as formerly, any general prejudice against the use of pork, still the rearing and fattening of swine gains ground but slowly.

There are a few poultry at almost every farm-house, but they are considered as unprofitable. However, both fowls and eggs bear so high a price in the great towns that poultry are still protected. Considerable numbers of *geese* were kept on *Mearns' moor*, before the division of that common, but there is no stock now of that kind on any common in this part of Scotland. *Turkeys* may be bought at Paisley, but they are seldom reared except at gentlemen's houses. *Pigeons* are not numerous; the pigeon houses at gentlemen's country seats having been generally removed, or allowed to fall to decay. There are no rabbit warrens in the county; the markets of Glasgow and other great towns being supplied from Ayrshire, and the islands of Cumbray in the frith of Clyde.

The number of *bee-hives* in the county seems of late years to be diminished; and it is highly probable that the bee was much more an object of attention, both to farmers and cottagers, anciently than it is now.

CHAPTER XIV.

RURAL ECONOMY.

SECTION I.—SERVANTS, LABOURERS, &c.

THE rate of wages of labourers and servants has greatly advanced within the last twenty years. This will appear from the following table exhibiting the prices of labour at three different periods: viz. in 1792—4, when the Statistical accounts of the different parishes of Renfrewshire were published; in 1804, when certain inquiries on this subject were made by the Highland society; and in the present year 1810.

Prices of labour in 1792—4, 1804, and 1810.

	1792–4.			1804.			1810.		
	£.	s.	d.	£.	s.	d.	£.	s.	d.
Men servants, by the year; besides board in the master's house,	10	0	0	15	0	0	21	0	0
Women servants, do.....	3	15	0	6	0	0	8	0	0
Labourers, by the day,...	0	1	4	0	1	11	0	2	2
Carpenters, by the day,...	0	1	9	0	2	8	0	3	6
Masons, by the day,.....	0	2	0	0	2	10	0	3	6
Reaping, by the acre,.....	0	8	0	0	12	0	0	14	0
Thrashing, per boll,.....	0	1	0	0	1	3	0	1	6
Thrashing, per quarter,...	0	1	11	0	2	11	0	3	6
Women in harvest, per day,.....	0	1	1	0	1	8	0	2	6

There is a variety of other farm business done by the day, and by piece work; such as,

	1795.						1810.			
	from			*to*			*from*		*to*	
	£.	s.	d.	£.	s.	d.	£.	s.	£.	s.
Ploughing, and harrowing, by the acre,.....	0	15	0	1	0	0	1	0	1	10
Mowing hay, per acre,.....	0	1	10	0	2	6	0	4	0	5
Digging ground, per acre,...	2	0	0	4	0	0	4	0	6	0
Inclosing by hedges and ditches with a railing on the top, per fall of 18½ feet,.....	0	2	6	3	0	0	0	4	0	6
Days work of a horse and Cart, with driver,.....	0	3	0	0	4	6	0	7	0	8

The hours for labour are, from 6 in the morning to 6 in the evening in summer: and from 8 in the morning to 4 in the afternoon in winter. But active farmers and their servants do not limit themselves to any fixed hours, especially in seed-time and harvest. In winter, the yearly farm servants are employed through the day in carting manure, in ploughing, and similar employments; and before day break, in thrashing corn with the flail, where it is not yet superseded by the thrashing machine.

SECTION II.—PROVISIONS.

The markets of Paisley, Greenock and Port-Glasgow, are well supplied with every kind of provisions. The following table exhibits the average rates of butcher meat, and poultry, &c. through the year, at the periods after stated; viz. when the Statistical account of Scotland was published, (1792 to 1794) and in the present year 1810.

	1792-4.		1810.			
	s.	d.	d.		s.	d.
Beef, per lb. of 22½ oz.....	0	5½	10	to	1	2
Mutton, do.....	0	6	11	to	1	3
Lamb, do.....	0	6	11	to	1	3
Veal, do.....	0	6½	11	to	1	3
A turkey.....	6	0	...	...	8	0
A hen,.....	1	6	...	...	3	6
A chicken,.....	0	6	...	...	1	0
A duck.....	1	3	...	...	2	0
Eggs, per dozen,.....	0	7	...	...	1	0
Butter, per lb. of 22½ oz..	0	10½	...	...	1	9
Cheese, do.....	0	4	...	...	0	9
Potatoes, per peck, of 37 lbs.	0	7	...	...	1	0
New milk, per Scots pint,..	0	2½	...	...	0	4
Butter-milk, per do.....	0	0½	...	...	0	1
Whey, per do.....	0	0½	...	...	0	0½

In this county, the *fiars*, or average prices of grain, are settled annually, in the same manner as in other counties, by a jury in presence of the Sheriff. Hence the value of different kinds of grain, at different periods, will appear from the following tables.

Table of the fiars (or average prices) of grain; viz. bear and barley, oats and oatmeal, for Renfrewshire, for fifty-seven years; viz. from 1754 to 1810, both inclusive.

Dates when fixed.	For the year.	Barley & bear, per boll.			Oats, per boll.			Oatmeal, per boll.		
		£.	s.	d.	£.	s.	d.	£.	s.	d.
26 Feb. 1755	1754	0	10	0	0	9	10	0	10	8
21 Feb. 1756	1755	0	13	4	0	10	5	0	14	0
22 April 1757	1756	0	18	4	0	14	2	0	19	0
28 Feb. 1758	1757	0	15	0	0	13	4	0	15	0
27 Feb. 1759	1758	0	9	2	0	8	4	0	9	4
27 March 1760	1759	0	9	2	0	9	0	0	9	7½
7 March 1761	1760	0	9	10	0	8	8	0	10	5
4 March 1762	1761	0	12	2	0	11	0	0	12	4
2 March 1763	1762	0	14	6	0	14	6	0	16	8
5 March 1764	1763	0	14	2	0	11	0	0	12	8
1 March 1765	1764	0	14	8	0	11	6	0	14	8
13 March 1766	1765	0	19	9	0	15	4	0	18	8
18 Feb. 1767	1766	0	19	0	0	13	4	0	18	8
26 Feb. 1768	1767	0	18	2	0	13	6¼	0	17	2
6 March 1769	1768	0	13	4	0	11	0	0	13	8
12 March 1770	1769	0	17	3½	0	13	6	0	16	0
20 March 1771	1770	0	15	9	0	14	6	0	16	0
16 March 1772	1771	0	17	7¼	0	13	11⅔	0	17	2⅔
29 March 1773	1772	0	17	6	0	13	6	0	16	8

Table of the fiar prices of barley, oats and oatmeal continued.

Dates when fixed.	For the Year.	Barley & bear, per boll.			Oats, per boll.			Oatmeal, per boll.		
		£.	s.	d.	£.	s.	d.	£.	s.	d.
21 March 1774	1773	0	18	6	0	14	0	0	16	4
15 March 1775	1774	0	17	0 1/3	0	12	5 2/3	0	15	4
1 March 1776	1775	0	15	0	0	11	2	0	13	0
1 March 1777	1776	0	14	0	0	12	6	0	13	2
4 March 1778	1777	0	15	11	0	11	8	0	14	0
6 March 1779	1778	0	14	0	0	12	3	0	14	10
11 March 1780	1779	0	12	4 1/4	0	11	8	0	12	5
13 March 1781	1780	0	15	0	0	11	9	0	15	1 1/3
19 March 1782	1781	0	13	9 1/2	0	11	6 3/4	0	13	8
18 March 1783	1782	1	2	6	0	15	6	1	1	0
16 March 1784	1783	0	18	6	0	12	6	0	16	8
16 March 1785	1784	0	19	6	0	14	1 1/2	0	17	4
10 March 1786	1785	0	16	3	0	12	6	0	14	4
12 March 1787	1786	0	15	0	0	12	0	0	15	8
8 March 1788	1787	0	16	11 1/3	0	12	1	0	15	4 1/3
11 March 1789	1788	0	14	11 1/2	0	12	4 1/2	0	14	8 1/2
13 March 1790	1789	0	16	11 1/4	0	13	0	0	15	0
12 March 1791	1790	0	16	9	0	13	8	0	16	4
15 March 1792	1791	0	18	7 1/4	0	14	3	0	17	3 1/2
14 March 1793	1792	1	1	9	0	15	4 1/2	0	17	8 1/6
27 March 1794	1793	0	19	4	0	16	10 1/2	0	17	10
10 March 1795	1794	1	3	0	0	17	0	0	17	1 1/2
31 March 1796	1795	1	5	5	0	17	11 1/4	1	0	8
25 March 1797	1796	1	3	1	0	16	3	0	18	9 1/2
27 March 1798	1797	0	17	6	0	13	8 1/2	0	16	2 1/2
11 March 1799	1798	0	19	0	0	15	10	0	17	9
20 March 1800	1799	1	8	10 1/2	1	6	6	1	12	9 1/4
10 March 1801	1800	2	7	6	1	15	0	2	6	3
9 March 1802	1801	1	9	1	0	18	0	1	0	0

Table of the fiar prices of barley, oats and oatmeal continued.

Dates when fixed.	For the year.	Barley & bear, per boll.			Oats, per boll.			Oatmeal, per boll.		
		£.	s.	d.	£.	s.	d.	£.	s.	d.
15 March 1803	1802	0	18	3	0	15	1	0	19	6
13 March 1804	1803	0	19	4	0	18	8	1	0	9½
22 March 1805	1804	1	11	8	1	0	3	1	1	11
13 March 1806	1805	1	5	3	0	19	4	1	2	0
16 March 1807	1806	1	6	6	1	0	8¼	1	2	9
14 March 1808	1807	1	4	10	1	2	0	1	9	10
14 March 1809	1808	1	10	11¼	1	6	0	1	7	10
16 March 1810	1809	1	11	8	1	5	0	1	7	6
8 March 1811	1810	1	9	7¼	1	0	10	1	2	11½

The records of the county contain but an imperfect account of the *fiars*, or average prices, of wheat, beans and pease, preceding the year 1778, but since that time they have been distinctly kept, and the following is a table of the fiar prices of those articles for thirty-three years, from 1778 to 1810, both inclusive.

Table of the fiar prices of wheat, beans and pease, from 1778 to 1810, both inclusive.

Dates when fixed.	For the year.	Wheat, per boll.			Beans and pease, per boll.		
		£.	s.	d.	£.	s.	d.
6 March 1779	1778	0	17	10½	0	14	0
11 March 1780	1779	0	14	7½	0	11	3
13 March 1781	1780	0	19	9	0	13	1¼
19 March 1782	1781	0	19	6	0	14	5½
18 March 1783	1782	1	5	6	1	0	0
16 March 1784	1783	0	18	9	0	17	8
16 March 1785	1784	0	18	0	0	15	10¼
10 March 1786	1785	0	19	0	0	15	6
12 March 1787	1786	0	18	3	0	17	0
8 March 1788	1787	1	1	0	0	16	3
11 March 1789	1788	1	1	6	0	14	9
13 March 1790	1789	1	5	0	0	16	7½
12 March 1791	1790	1	1	8	0	17	2⅓
15 March 1792	1791	1	0	10	0	16	4
14 March 1793	1792	1	0	3	1	0	0
27 March 1794	1793	1	2	6	1	0	0
10 March 1795	1794	1	4	9	1	0	0
31 March 1796	1795	2	5	0	1	4	1
25 March 1797	1796	1	6	5½	1	0	0
29 March 1798	1797	1	0	4½	no	fiar	
11 March 1799	1798	1	3	9½	no	fiar	
20 March 1800	1799	2	2	7½	1	16	0
10 March 1801	1800	2	3	0	2	13	0
9 March 1802	1801	2	0	0	1	4	0
15 March 1803	1802	1	2	1	1	1	0
13 March 1804	1803	1	4	3	1	2	8
22 March 1805	1804	1	19	0	1	4	8
13 March 1806	1805	1	10	0	1	4	2
16 March 1807	1806	1	15	2¼	1	5	3½
14 March 1808	1807	1	11	8¼	1	17	0
14 March 1809	1808	2	2	11	1	17	11
16 March 1810	1809	1	19	8	1	9	10
8 March 1811	1810	1	10	10½	1	8	9

Recapitulation of the average prices of grain in the county of Renfrew, for thirty years, from 1780 to 1809, both inclusive, divided into periods of six years.

Periods of six years.	Wheat, per boll.			Bear & barley, per boll.			Beans & pease, per boll.			Oats, per boll.			Oatmeal, per boll.		
	£.	s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.
Crop 1780 to 1785, inclusive,	1	0	1	0	19	1	0	16	$1\frac{1}{3}$	0	13	0	0	16	$4\frac{1}{4}$
1786 to 1791, do.....	1	1	$4\frac{1}{2}$	0	16	$6\frac{1}{3}$	0	16	$4\frac{1}{3}$	0	12	$10\frac{3}{4}$	0	15	$8\frac{2}{3}$
1792 to 1797, do.....	1	6	$6\frac{2}{3}$	1	1	$8\frac{1}{6}$	1	0	$9\frac{5}{6}$	0	16	$0\frac{1}{4}$	0	18	$0\frac{1}{2}$
1798 to 1803, do.....	1	15	$11\frac{1}{2}$	1	7	0	1	11	4	1	1	$6\frac{1}{6}$	1	6	$2\frac{1}{8}$
1804 to 1809, do.....	1	16	5	1	8	$5\frac{3}{4}$	1	9	$9\frac{1}{4}$	1	2	$2\frac{1}{8}$	1	5	$3\frac{2}{3}$
	7	0	$4\frac{1}{2}$	5	12	$9\frac{1}{3}$	5	14	$5\frac{1}{6}$	4	5	$7\frac{1}{4}$	5	1	$7\frac{1}{4}$
Average on the whole,	1	8	1	1	2	$6\frac{2}{3}$	1	2	$10\frac{2}{3}$	0	17	$1\frac{1}{3}$	1	0	$3\frac{1}{6}$

Upon comparing the fiar prices of grain in Renfrewshire and Berwickshire, it appears that they are higher in the former than in the latter: and, from the following table it will be found, that oatmeal is, in general, about 3*s.* 6*d.* per boll, higher.

	Ten years ending crop 1770.			Ten years ending crop 1780.			Ten years ending crop 1790.			Ten years ending crop 1800.			Eight years ending crop 1808.		
	£.	s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.
Renfrewshire,	0	15	$7\frac{3}{4}$	0	14	$9\frac{3}{4}$	0	16	$0\frac{1}{2}$	1	2	3	1	3	1
Berwickshire,	0	12	5	0	10	10	0	12	8	0	19	3	0	19	8

In Renfrewshire where the *dairy* affords a considerable income to the farmer, and where he also derives considerable profits from the sale of *hay*, it may be of importance to state the progressive rise of hay, and of the produce of the dairy for a series of years.

Artificial grasses, or rye-grass and clover, were introduced partially in this county about the year 1766,[a] and, at that time, hay was sold at 3*d.* per stone of 22½ lbs, that is £1 5*s.* per ton.[b] In the course of about twenty or thirty years the price rose to 5*d.* or 6*d.* per stone, or from £2 to £2 10*s.* per ton.

The hay of crop	1794 was sold at	£2 0 0 per ton.
	1795.....	£2 2 0
	1796.....	£3 0 0
	Average,	£2 7 4

At the end of the last, and beginning of the present century, the price advanced to £5 per ton, and was then at its highest. The following table exhibits the prices of hay for the last ten years, in the month of August or beginning of September, being the period at which most of the farmers in this part of the country carry their hay to market.

a See Statistical account of Scotland, vol. vii. p. 84.

b Five stones trone are equal to one cwt. and 100 stones is a ton.

Table of the prices of hay.

Crop.		Rate per ton, i. e. 100 stones.		
		£.	s.	d.
1801	.....	5	0	0
1802	.....	3	2	6
1803	.....	2	14	2
1804	.....	2	10	0
1805	.....	3	15	0
1806	.....	3	15	0
1807	.....	4	0	0
1808	.....	3	17	1
1809	.....	4	11	8
1810	.....	4	15	0
		38	0	5
Average price for the last ten years,		3	16	0½

Straw, which is not sold in large quantities, brought, about fifteen years ago, 3*d.* per stone. The general price of late has been 6*d.* per stone, or £2 10*s.* per ton.

The prices of *butter*, the principal article of *dairy-produce*, are preserved in the following table, drawn up, from 1780 to 1797, by the respectable proprietor[a] of a large dairy farm in the parish of Mearns, and continued to the present time by persons of accuracy.

a Archibald Henderson Esq. of Middleton.

Prices of butter per cwt. equal to 112 lbs. [a]

Years.	Prices. £.	s.	d.
1780	2	7	3
1781	2	12	2
1782	2	14	8
1783	2	13	0
1784	2	19	7
1785	2	17	1
1786	3	4	7
1787	3	4	7
1788	2	19	8
1789	2	19	8
1790	3	4	7
1791	3	6	3
1792	3	9	7
1793	3	9	7
1794	3	7	1
1795	3	12	11
1796	4	6	2
1797	4	9	5
1798	4	16	11
1799	4	19	5
1800	5	4	4
1801	5	8	1
1802	5	8	6
1803	5	9	9
1804	5	11	10
1805	5	14	3
1806	5	14	3
1807	5	15	11
1808	6	4	3
1809	6	9	2
1810	6	15	10
Average of fifteen years, 1780—1794,	3	0	7½
Price for the year 1795,	3	12	11
Average of fifteen years, 1796—1810,	5	9	10½
Average of the above thirty-one years	4	4	10

a One cwt. or 112 lbs. averdupois, equal to 80 lbs. trone.

From what has been now stated, it is plain that there have been great advances on the price of farm produce during the last thirty years; and that these advances have taken place chiefly since the year 1795. This will appear from the following table, specifying the rate per cent of advance on grain, &c. and the proportion of rise on each article during separate periods of fifteen years.

Table of the rate per cent of advance on farm produce.

	Rise from 1781 to 1795.	Rise from 1796 to 1810.	Total rise in thirty years.
Oat-meal,.....	31 pr ct.	61 pr ct.	92 pr ct.
Oats,.....	42 —	56 —	98 —
Wheat,.....	57 —	45 —	102 —
Barley,.....	62 —	50 —	112 —
Beans and pease,	59 —	93 —	152 —
Hay,.....	50 —	95 —	145 —
Butter,.....	37 —	100 —	137 —
Beef and mutton,	44 —	100 —	144 —

It is evident that the rise of prices on the articles last mentioned far exceeds the rises on the price of grain; a circumstance which will induce the farmer to continue to improve his grass grounds, especially as the prices of *dairy produce*, are not yet at their height. For, although the prices of fresh butter, in Glasgow, Paisley, and Greenock, are constantly advancing, yet they are by no means so high as in some of the great towns, in other parts of the kingdom. In Edinburgh the rate is generally higher than in Glasgow: and in

Liverpool, nineteen years ago, the prices of fresh butter per cwt. compared with the prices in Renfrewshire, were as follow:

	1791.			1792.			1793.		
	£.	s.	d.	£.	s.	d.	£.	s.	d.
In Liverpool,[a]....	4	7	11	4	8	11	4	18	4
In Renfrewshire,	3	6	3	3	9	7	3	9	7

And when recent prices are compared we find that for 1808, 1809, 1810, and 1811, they were;

	Lowest rate.			Highest rate.		
	£.	s.	d.	£.	s.	d.
In Liverpool,.....	7	1	0	9	2	6
In Renfrewshire,.....	5	12	8	7	19	0
And in Cheshire in 1806.[b]	6	10	8	8	8	0

Besides his income from the *dairy*, the owner or occupier of hill pastures, or grass grounds of inferior quality, derives profit from taking in young cattle to be grazed, from the middle of May to the first of November. The price of such grazings has gradually advanced; and, for a few years past, the annual rate for one year old queys, has been £2; for two year old queys, £2 10*s.*; and for all ages

a See Holt's Agricultural survey of Lancashire, p. 154.
b See Holland's Agriculture of Cheshire, p 298.

above two years, £3 5*s.*: but where the pastures are good, milk cows are by far the most profitable stock.

The provisions of the labouring classes, and their domestic economy, are fully detailed in the agricultural surveys of Lanark, Berwick, Peebles, and other counties:[a] and the modes of life in Renfrewshire being the same as in Lanarkshire, it is not necessary to enter upon that subject here. A more frequent use of *tea*, with bread and butter, for breakfast, and sometimes in the afternoon, is prevailing among cottagers and mechanics; this of course increases the prices of the produce of the dairy; but oatmeal is still a most essential article in the food of the Scottish peasantry. It was a current opinion in a great part of Scotland, that a day's wages of a labourer ought to equal the price of a peck of oatmeal: but the rate of labour is at least 30 per cent above that calculation: for that oatmeal has not risen in the same ratio as wheat and other articles, is plain from the preceding tables of fiar prices; in which the

	£.	s.	d.
Average price per boll for 19 years, 1754—1772, is.....	0	14	8
Average price per boll for 19 years, 1773—1791, is.....	0	15	3½
Average price per boll for 19 years, 1792—1810, is.....	1	3	2
Average for the whole 57 years,	0	17	8½

a See Agricultural survey of Clydesdale, page 135. Ag. survey of Berwickshire, p. 421. Ag. survey of Peebleshire, p. 41—44.

It has been already stated,[a] that the towns of Paisley, Greenock and Port-Glasgow, are well supplied with provisions. The following account of the number of cattle, &c. killed for the Paisley market, at different periods, will serve to give an idea of the consumption of butcher meat in that town and suburbs.

From Sep. to Sep.	Oxen & cows.	Calves.	Sheep.	Lambs.	Hogs	goats
1781 — 1782	2193	2724	3318	3219	80	87
1791 — 1792	2633	2412	2081	2978	138	5
1792 — 1793	2682	2220	1806	2158	87	1
1793 — 1794	2488	2100	1594	2564	73	1
Average of these 3 years,	2601	2244	1827	2567	99	2
1805 — 1806	1627	1608	2490	4763	55	0
1806 — 1807	2031	1856	3811	4603	85	0
1807 — 1808	1848	1632	3333	3712	83	15
1808 — 1809	1807	1520	3541	4028	37	0
1809 — 1810	1797	1818	2749	4042	85	22[b]
Average of the last 5 years,..	1822	1687	3185	4230	69	7

Prior to 1795 there were fewer oxen killed than at present, but there was a greater number of cows; these, however, were of a small size, compared with

a Page 160.
b Twenty-two deer.

what are now brought to market. It must also be observed, that, fifteen or eighteen years ago, very few cattle, sheep, &c. were killed in the *suburbs*, or *new town* of Paisley; but of late there have been great supplies of butcher meat in the suburbs. Last year there were slaughtered in the new town;

Cows and oxen,.....	729
Calves,.....	631
Sheep and Lambs,...	6363

These, when added to what are killed in the market of the *old town*, will give a pretty correct view of the quantity of butcher meat consumed in Paisley and the suburbs.

The market is supplied with cattle from the counties of Angus, Fife, Lanark, and Ayr. It is probable the consumpt of Greenock is nearly equal to that of Paisley.

SECTION III.—FUEL.

In bringing into view the prices of those general articles by which the state of the country may be judged of, an article so important as that of fuel ought not to be forgotten. In some parts of Renfrewshire, particularly in the vicinity of muirs and mosses, peat is *partially* used, but coal is by far the most general fuel throughout the county. In 1795, it was commonly sold, at the pits, at 4*s.* 6*d.* per ton;

the price is now from 6*s.* 8*d.* to 10*s.* Some parts of the county are situated at a considerable distance from the coal-pits; but owing to the facility of water carriage by the Clyde, and the improved state of the roads, that inconvenience is but little felt. The price of coal at Paisley is from 11*s.* to 14*s.* per ton.

CHAPTER XV.

POLITICAL ECONOMY, AS CONNECTED WITH, OR AFFECTING AGRICULTURE.

SECTION I.—ROADS, BRIDGES, FERRIES.

THE roads in this district as in the other counties of Scotland, were maintained, about sixty years ago, under the acts of Charles II. and 5th of Geo. I. called the *statute labour acts*,[a] by which the Justices of peace were authorized to call out the tenants, cotters and servants, with their horses, carts and implements, for six days yearly, to make and repair the high-ways within the county. As those acts were every where found ineffectual, turnpikes were introduced into Scotland in 1750, and vested in trust in the proprietors of land. In the year 1753 a turnpike act was obtained for making certain roads leading into the city of Glasgow; that act was soon afterwards explained and amended;[b] and in consequence of this road-bill, and of an act for building a bridge at Inchinnan,[c] the roads from Glasgow to

a See Acts Charles II. Par. 1. Sess. 1. c. 38. Charles II. Par. 2. Sess. 1. c. 16. Charles II. Par. 2. Sess. 2. c. 9. and 5th of George I.

b 26 Geo. II. c. 90. 27 Geo. II. c. 27.

c 30 Geo. II. c. 57.

the confines of the county of Ayr at Floak, on the Kilmarnock road; and from Glasgow to Greenock; and from Three-mile-house to Clerk's-bridge, on the road to Beith; were executed about fifty years ago. The statute labour was reserved for the cross and parochial roads in the county, which were in such a state as to be almost impassable, and altogether unfit for carriages. In fact, wheel carriages were not then used; for, so late as the year 1770, lime, coal, grain, &c. were generally conveyed on horses' backs.[a] Till the year 1792, the roads in Renfrewshire met with slight attention, there being no turnpike roads except the three lines of road above mentioned, and these had been conducted in very hilly and improper courses. The parish roads, in particular, owing to the statute services not being converted into money, were much neglected. Two acts of parliament were obtained eighteen years ago; one for converting the statute labour, the other, a turnpike act for making certain new roads.[b] These received the royal assent in June 1792, and very unusual exertions were instantly made in repairing the old roads, building and widening bridges, and making new lines of communication; so that in the first three years more than £30,000 were expended on these important objects. In consequence of a farther extension of these acts of parliament, and of a renewal of turnpike acts in 1804,[c] similar improvements on

a See Statistical account, vol. vii. p. 84.

b 32 Geo. III. c. 121.

c 37 Geo. III. c. 162 and 44 Geo III.

roads within this county have been farther prosecuted. New lines of road have been made by the magistrates of Greenock, to the west of that town, and along the shore to Kelly-bridge, on the boundary with Ayrshire, at an expense of £12,000. The roads from Glasgow to Ayrshire, by Cathcart and by Pollockshaws, have been greatly improved, and the trustees on these lines are at present expending £11,000 in altering the line of road up the course of Lavern to Loch-libo, which will be prolonged by the Ayrshire trustees to the burgh of Irvine. So that on the whole, the gentlemen of this county have expended, within a very short period, about £100,000 in building a great number of bridges, and in making and repairing above 140 miles of turnpike roads within this district; and have borrowed sums of money to that extent, for accomplishing these beneficial purposes. A large sum in so small a county! but necessary in consequence of the great population, and extensive manufacturing and commercial establishments in this part of the kingdom.

At the toll-bars near the great towns, and at some of the bars in the country, steel-yards on Fairbairn's construction, are erected for weighing carts; and the toll duties are in proportion to the weight. The following table of the *highest rates*, levied at turnpike gates in the neighbourhood of great towns, will illustrate this.

	£.	s.	d.
For every chaise drawn by two horses,...	0	1	6
Do. by one horse,.....	0	0	8
For every horse not in a carriage,.....	0	0	3
For every cart drawn by one horse,.....	0	0	6
Cart drawn by one horse, where the fellies of the wheels do not measure 4 inches, if exceeding 20 cwt. and not exceeding 25 cwt.....	0	0	9
Do. 25 cwt. and not exceeding 30 cwt.....	0	1	3
Do. 30 cwt. to 35 cwt.....	0	1	6
Do. 35 cwt. and upwards,.....	0	2	3

The toll duties on dung and lime for manure, are modified to a lower rate, and these articles are not subject to weighing; carts loaded with coals, drawn by one horse, if of the above weights, are subject to a toll duty of *3d. 4d. 5d.* and *6d.* respectively.

The yearly revenues from toll-bars in the county, at different periods, were nearly as follow:

Prior to 1792, before the acts of Parliament for making new roads were obtained,..... £ 2,100
From Whitsunday 1794 to Whit. 1795,....£ 3,000
From Whitsunday 1803 to Whit. 1804,....£ 6,500
From Whitsunday 1810 to Whit. 1811,....£10,300

But large as this revenue may appear, it is inadequate for the support of the roads, the interest of debt, and the expense of management. The vast number of waggons, caravans, and other carriages in the neighbourhood of the great towns; the numerous

post chaises; with about twenty stage coaches, and four mail coaches, constantly travelling on the roads of this county; the wetness of the climate, and the heavy loads conveyed on narrow wheels by the carters at Glasgow and Paisley; all conspire to render the maintaining of the roads very expensive; and any circumstance which tends to impair the revenue arising from the tolls, or to increase the expense of repairs may most justly be complained of, and ought to be opposed. The effect of the mail coaches, which are exempted from paying toll,[a] in injuring turnpike roads and impairing the income for supporting them, is well known over the whole of the united kingdom; and in 1809 meetings of road trustees were held in the different counties of Scotland, for obtaining a repeal of the act granting this exemption. The case which they stated was, that ten mail coaches and other dilligences, pass through twenty-one counties, and affect the revenue of turnpikes to the extent of £6865 yearly, and that the loss in Renfrewshire alone was £817. But both of these sums are evidently below the truth, and the latter calculation far short of the actual loss. Of the mail coaches which are daily dispatched from Glasgow, two run to Greenock and return the same day; one runs to Ayr; and there is a daily arrival in Glasgow of a mail coach from that town. These, and a post gig between Greenock and Largs, daily pass over 118 miles of turnpike road within Renfrewshire, occasioning a loss of toll duty to the amount of £1022

a See Act. 25. Geo. III. c. 57.

per annum, or nearly a tenth part of the whole revenue of the tolls of this county: a loss far exceeding that of any other in Scotland. "It is not however "from a view of the aggregate loss, that the "extent of the evil is to be estimated. The great "weight of those carriages, and the velocity with "which they travel, injure the roads to an extent "which the toll chargeable for them, though paid, "would not compensate. A mail coach with its "passengers and other loading, will weigh two tons, "(and of this the mail is only 3 cwt.) and it must "travel from eight to nine miles in the hour, where-"by the road suffers infinitely more than by the "slow steady pace of a cart or waggon of the same "burden."[a] In most counties of Scotland, the landed proprietors made large advances, from their private fortunes, in forming great lines of road through the kingdom, trusting for re-imbursement to the toll duties. In Renfrewshire, as in many other counties, the original debt is unredeemed; and the exemption in favour of mail coaches, evidently diminishes the turnpike funds to such extent, that the trustees on the roads in this county have been under the necessity of augmenting the tolls, and of subjecting manure to toll duty, which had been long exempted for the encouragement of farmers. "It is difficult therefore to imagine, on "what principle, Government should have been in-"duced, at first, to give to mail coaches an unlimit-

a See case of the proprietors of land and trustees for high-roads, in those counties of Scotland through which the Royal mail coaches travel.

"ed exemption from payment of tolls; but it is "still more difficult to conjecture the reason for con- "tinuing an exemption which is unquestionably a "breach of public faith with the trustees for the "roads and the landed interest, and serves no pur- "pose whatever at present but to put money into "the pockets of the mail contractors."[a] A small additional charge on passengers and parcels might indemnify them, if their profits will not bear the toll duty. The subject is at present under the consideration of a committee of parliament, and it is hoped Government will now grant redress to the landholders and road trustees, by a repeal of the law which exempts mail coaches from toll duty.

The *statute labour*, or *services*, on public and parish roads, were converted into money in 1792, the occupiers of land paying £1 sterling for each £100 Scots of valuation, and householders 2*s.* yearly. In the year 1803 it was found necessary to augment these rates, and they are now, by act of parliament, as follow: Occupiers of land pay £1 9*s.* 2*d.* for every £100 Scots of valuation; and, where the valued rent does not exceed £50, the road trustees have the option either to rate the occupier by his valuation, or to tax him in 7*s.* 6*d.* for every horse which he possesses. Carters, carriers and other persons keeping horses, who are not occupiers of land, pay 7*s.* 6*d.* for each horse. Householders from the age of sixteen to sixty, and tradesmen or artificers, though not householders,

a See case of the proprietors of land, &c. of Scotland.

pay 3*s.* annually. The whole fund arising in the county, from this conversion of statute labour, may amount to £1400 per annum; besides what is collected from Greenock, Port-Glasgow and Paisley, which is applied in paving the streets and lanes of those towns, and in repairing the roads immediately adjoining to them. No part of this £1400 is applied to support roads which are under the turnpike acts, but the whole is appropriated solely to parish roads.

In making roads, the most approved method is to lay the bottom with sandstone, in form of a rough causeway; and over this to put a proper covering of whinstone reduced to a small size; in many instances to about a pound weight. Roads are also made and repaired with a species of limestone from Darnly already described.[a] The materials are frequently prepared and carted at a certain rate per cubic yard, the expense varying from 3*s.* 6*d.* to 5*s.*, according to the distance of carting, difficulty of quarrying and breaking, or other circumstances. The original cost of some of the great roads in the county has been near £1000 per mile; and the annual repairs amount to a very large sum. The ditches on the great roads are formed in the inside of the adjoining fields, and the most public lines of communication are laid out, from 45 to 50 feet wide, so as to admit of a foot path. Within the last fifteen years from 40 to 50 miles of excellent foot paths have been made along the turnpike roads, affording great convenience

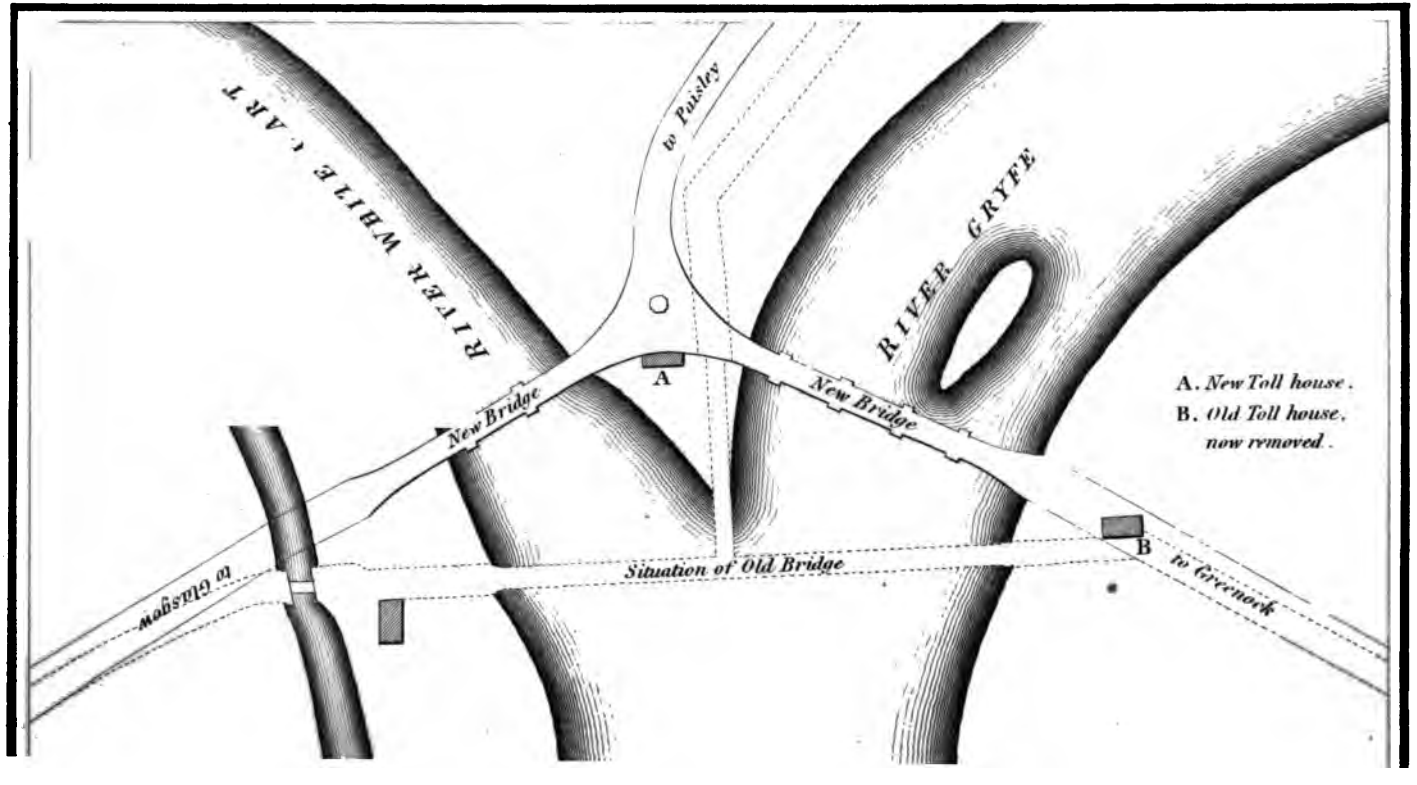
a See page 23.

and comfort to the inhabitants of this populous district. Although the forming and making of these, perhaps did not originate in Renfrewshire, yet, as they have been carried to greater extent in this county than in any other, it deserves to be particularly noticed, that the foot paths now made in the neighbourhood of the great towns of Paisley and Greenock, are completed and kept in excellent order. Along every great road leading into Paisley, there are paths from 6 to 8 feet wide, covered with gravel or furnace ashes, and the edge supported with a *crib-stone*, or with turf: and the liberality of the landed gentlemen and road trustees, in thus accommodating the public, is universally acknowledged in this district, and their example will probably be followed in other counties.

The annual sum collected in the county for building and repairing *bridges* is £144 2*s.* 2*d.* being 4*s.* 2*d.* sterling on each £100 Scots of valuation; but this having been found inadequate, even for the bridges on the small streams and rivulets, is therefore not applied to any of the bridges over the larger rivers, which are generally supported from the turnpike funds. There are twenty-five bridges over the rivers Gryfe, White-Cart and Black-Cart: but the most important bridge in Renfrewshire was built over these united rivers, at the ferry of Inchinnan, in the year 1759. It consisted of nine large arches, with a communication from the middle of the bridge by an arch connecting it with the land lying between the Gryfe and White-Cart. The expense was defrayed by a toll levied from every passenger; and the man-

Plate II.

PLAN of SITUATION of INCHINNAN BRIDGES



agement was committed to trustees. In 1782 it rented at £377 5*s.*: and, in 1787, after paying the debt and accumulating a small surplus of £400, for repairs, this toll was taken off, and the public enjoyed the benefit of that easy passage for twenty-one years, free of any tax. Unfortunately the imperfect state of the work, and the insecure foundations of the bridge, occasioned its failure in spring 1809, in consequence of a flood. It is now rebuilding, in an elegant and most substantial manner, with excellent freestone from Mr Fulton's quarry at Park, at an expense of £17,000, by the trustees on the Greenock road. The old bridge was built for the sum of £1450.

There are four *ferries* across the river Clyde to Argyleshire, Dumbartonshire, and the north-east part of Renfrewshire; viz. at the Cloch-point, in the parish of Innerkip; at the Castle of Dumbarton; at Erskine; and at Renfrew. They afford £200 of yearly rent. The mode of conveyance across the Clyde at Renfrew deserves to be noticed as particularly convenient. A *boat* is constructed with a flat bottom, open at either end and admitting carriages without un-harnessing the horses. A rope is stretched across the river resting on two rollers in the boat; the rope being pulled by the ferryman carries the boat across. One end of the rope being fixed to a windlass or capstone, it may be slackened so as to allow vessels of any burden to pass over it.

In concluding the subject of roads and bridges, it would be unjust to omit the present opportunity of paying respect to the memory of Mr M'Dowall of Garthland, to whom the county of Renfrew is

under peculiar obligations. This district will long continue to feel the good effects of his zeal for their interests, and of his abilities and exertions in promoting every internal improvement.

SECTION II.—CANALS.

The great improvements carried on, for a series of years, by the city of Glasgow, in deepening the river Clyde,[a] give Renfrewshire the benefit of excellent water carriage along its northern boundary. The town of Paisley, by means of the river White-Cart, enjoys the same benefit though in an imperfect degree, the navigation being in some measure impeded by the shoals in that river; so that this navigation, though improved in 1786, as already mentioned,[b] affords but a small revenue for the great expense which has been incurred. The tonnage was let in 1791 at £155; from Whitsunday 1792 to Whitsunday 1793 it brought £250;[c] of late years about £190; and at present (1811) it is let for £228. But the county of Renfrew was not, till the present time, possessed of the advantage of inland navigation.

Various canals have been projected at different times. Mr Watt of Birmingham, so well known over Europe for his improvements of the steam en-

a See pages 30—33.
b See page 34.
c See Stat. account, vol. vii. p. 78.

gine, &c. resided in Glasgow as a civil Engineer, and in 1773 surveyed and estimated a small canal from Hurlet coal work to Paisley, a distance of nearly 3 miles, the expense of which was only £4600: this, however, was a private undertaking, and was never carried into execution. Afterwards, about the year 1791, a canal from Paisley to Saltcoats had occurred to a number of gentlemen as a measure of essential service to the public. This is distinctly stated in the Statistical account of Beith,[a] published in 1793; the proper line for the canal is traced, the elevation of the summit level above the sea is given, which is stated to be 95 feet, and the advantages in laying open coal, ironstone, and lime, are pointed out. In 1804, surveys, plans, and estimates were drawn up by Mr Telford, Engineer; afterwards a report relative to a proposed canal from Glasgow to the harbour of Ardrossan, on the west coast of Ayrshire, was laid before public meetings held at Glasgow and Paisley; and in 1806 an act of parliament was obtained for carrying into execution this important undertaking. The expense of the main line of canal from Glasgow, through Paisley and Johnstone, to Ardrossan, a distance of 31¼ miles was estimated at £125,000; but, as the amount of subscriptions was only about a third part of this sum, the canal proprietors are now executing only the lower reach of the canal, viz. from Glasgow, through Paisley, to Johnstone, a distance of eleven miles, at an expense of about £90,000; it was begun in

a See Statistical account of Scotland, vol. viii. p 327.

1807, was opened from Paisley to Johnstone in November 1810, and will be open to Glasgow in a few months. The width at the surface is 25 feet, and 13 at bottom; the depth of water about 4 feet, and the passage in the bridges 11 feet. Although this is but a small part of a great plan, it will prove of much benefit to a most populous part of Renfrewshire. Great quantities of grain, timber, coal, iron, tallow, potashes, &c. are conveyed from Glasgow to Paisley and the suburbs; and lime, limestone, ironstone, soapers'-waste, &c. may be returned: potatoes and other articles of produce, which from their great bulk and small value, do not admit of being carried to a distance by land, will probably be transported in boat loads to the great towns; and, as there are no interruptions by locks, the advantages of passage boats on this canal are most obvious. It is to be hoped that the income will amply reward those private adventurers who have the public spirit to execute so beneficial a scheme. A branch of canal from Tradestown, up the south side of the Clyde to the Collieries of Eastfield and Hamilton-farm, opposite to Clyde-iron-works, a distance of 3¼ miles; and a branch of canal, or railway to Hurlet, a distance of 1¾ miles, may be very productive. The former, which would be on the same level with the lower reach of the canal, is estimated, by Mr Telford, at only £10,500; and a railway to Hurlet, with proper turning places, and including two aqueducts, is estimated, by the same Engineer, at £3,300; who concludes his report by observing, "that the more this canal, with its probable exten-

"sions, is examined into and considered, its value, "whether as a distinct speculation, or as a general "improvement in the country, will appear still more "important to every unprejudiced and judicious ob-"server." The country is much indebted to the Earl of Eglinton for promoting this important and most useful undertaking.

SECTION III.—FAIRS.

There are no fairs of much importance in Renfrewshire. The fairs of greatest consequence are held at Paisley, for cows and horses, in May and August; and at Renfrew, in May, for the sale of milk cows. The fairs in Lanarkshire, held in Glasgow at midsummer, for the sale of horses and cows, and at Rutherglen, for the sale of horses, are much resorted to by the farmers of Renfrewshire. A few farmers go annually to the trysts of Falkirk; and to the fairs at Doune and Dumbarton. At almost every town and village in the county, annual fairs are held; but at these there is no business of importance transacted.

SECTION IV.—WEEKLY MARKETS.

There is a weekly market at Paisley, on Thursday, and at Greenock on Friday; to each of which

there are regular supplies of provisions conveyed by the farmers. There are no corn markets, so that the small quantity of grain raised within the county is not exposed to sale on any particular fixed days. The market in Glasgow on Wednesday is much resorted to by the farmers in the east parts of Renfrewshire: and the weekly markets held in that city, early in spring, for the sale of horses, are attended by farmers from the adjoining counties.

SECTION V.—WEIGHTS AND MEASURES.

The inequalities of weights and measures over the kingdom, and the difference betwixt the standards of this county and those of the adjoining, especially as Glasgow in Lanarkshire is the market for a great part of Renfrewshire, occasion great inconvenience to the farmer. The difference is so great, and the variety of weights and measures so numerous, that it is a matter of patient study to understand them, and an intricate calculation to compare them. This is far above the capacity of ordinary farmers. Of all this the legislature seem to have been long ago sensible, and endeavoured to provide a remedy by the treaty of union. By the 17th article of that treaty it was agreed, that the weights and measures should be of one denomination over the whole of the united kingdom; the Winchester bushel was fixed on as the standard for measures of capacity, and the avoirdupois pound as the standard for weight. Standard

weights and measures from England were, accordingly, sent to Scotland; but, as has been justly observed in a small treatise on this subject, "they added to the *number* of our different weights and measures, but did not supersede any of them."[a] According to these standards, the measures of capacity and weights, and the lineal and superficial measures of the nation, might all be checked and regulated; and, had this laudable plan been pursued, and a judicious choice of a standard been made, the present intricacy and confusion of weights and measures would have hardly now been known.

Nothing could be more advantageous in commerce than to have but one common standard. In Scotland, we are obliged to understand the whole of the English weights and measures; because all bounties are allowed, and taxes paid, according to those, throughout the empire. The most important of them are the avoirdupois weight and the Winchester bushel. Corn of all kinds is exported from Greenock and Port-Glasgow in this county, as from all other maritime counties, by the Winchester bushel; and, when all circumstances are considered, we certainly cannot adopt a better standard. The English quarter, or 8 Winchester bushels is *ten cubic feet;* each bushel being very nearly $1\frac{1}{4}$ cubic feet: the cubic foot contains *precisely* 1000 ounces avoirdupois of pure distilled water, or of rain water in a temperate state; and the ounce avoirdupois contains

a Swinton on weights and measures.

7000 grains;[a] circumstances which shew, that, in originally fixing those standards, regard had been had to facilitating calculation by adopting the decimal division: "and it is highly probable, that, when the "quarter was established, it was originally intended "to have been ten cubic feet."[b]

In Renfrewshire, the lineal measures which occur in country affairs are, the ell, the fall, and the chain; the superficial measure for land, is the Scots acre. The measures of capacity are, the mutchkin, Scots pint, peck, firlot, and boll. The weights are, the Dutch pound, which is nearly the Scots Troy, the trone pound, and the stone. It is necessary to explain each of these.

Lineal measures.—The Scots foot was anciently somewhat larger than the English, 186 of the latter being equal to 185 of the former; but they are now universally considered as equal. The Scots *ell*, however, is 37 inches, that is, an inch longer than the English yard. The *fall* is 6 ells, or 18½ feet, and the Scots chain is now universally considered as 24 ells,

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a According to Dr Arbuthnot, and to the Transactions of the Royal Society in 1742 and 1743, the avoirdupois pound is 7000 Troy grains. The same eminent man has taken as a standard for fixing the bushel, the corn-gallon kept in Guildhall, which contains $272\frac{1}{4}$ solid inches: therefore, according to his calculations, the bushel is 2178 cubic inches: Mr Everard and others in the year 1696 found the standard bushel to contain only $2145\frac{4}{5}$ solid inches; the medium of these is $2161\frac{4}{5}$ inches, that is nearly $1\frac{1}{4}$ cubic feet, or 2160 inches for the bushel: but the Winchester bushel in common use is somewhat less, being only 2150.425 solid inches.

b See observations on an uinversal standard of weights and measures, by Dr John Rotheram, professor of Natural Philosophy at St Andrews. Edin. 1791.

or 74 feet. When regard was had to the difference between the Scots and English foot, the *ell*, the *fall*, and the *chain*, were, respectively, 3 feet $1\frac{1}{5}$ inches; 18 feet $7\frac{1}{5}$ inches; and 74 feet $4\frac{4}{5}$ inches.

Superficial measures.—The Scots acre, according to which land is at *present* measured, is raised from a chain of 74 feet, and contains 54,760 square feet. As the English acre contains 43,560 square feet, their respective proportions are, 10,000 English acres, equal to 7954 Scots acres; or 10,000 Scots acres, equal to 12,751 English acres: and a square mile contains 640 English or $509\frac{1}{10}$ Scots acres. If regard is paid to the difference between the Scots and English foot, and the acre raised from a chain of 74 feet $4\frac{4}{5}$ inches, then 10,000 English acres are equal to 7869 Scots acres; or 10,000 Scots acres, equal to 12,708 English acres.

Measures of capacity.—The Scots pint contains 103.404 cubic inches; and is divided into chopins, mutchkins, and gills; and the mutchkin, which is one fourth of a Scots pint, contains 25.851 cubic inches. As the English pint contains 28.875 inches, it is nearly 3 cubic inches larger than the mutchkin. It was enacted in the bill for laying a duty upon malt; that every round bushel, with a plain and even bottom, being $18\frac{1}{2}$ inches diameter throughout, and 8 inches deep, should be esteemed a legal Winchester bushel.[a] According to this act, ratified in the first

a See 13 William III. cap. 5.

year of Queen Ann, the legal Winchester bushel contains 2150.425 solid inches; consequently the English quarter, or 8 Winchester bushels, is 17203.4 cubic inches, or nearly ten cubic feet, as already mentioned.

	Cubic in.
The standard wheat boll of Scotland, or Linlithgow measure, according to which that species of grain is almost always sold in Scotland is,.....	8798.34
The boll of Renfrewshire for oats and bear,.....	13623.476
And the boll of Renfrewshire for beans and pease,.....	9616.572

Weights.—The avordupois pound is used in this county, as over all Scotland, for all groceries and for a great variety of merchandize. The Dutch pound and Scots Troy, which are nearly equal, and the trone pound, are used for weighing almost every article of farm produce. Oatmeal is weighed by the Dutch pound or Scots Troy, 8 stones or 128 lbs. Dutch to the boll, which is equal to $139\frac{264}{1000}$ or nearly $139\frac{1}{4}$ lbs. avoirdupois.[a] Hay, butcher meat, cheese, butter, and some other articles, are weighed by trone weight. The stone is 16 lbs., and each lb. being $22\frac{1}{2}$ oz. avoirdupois, one cwt. (112 lbs.)

[a] The Amsterdam or Dutch pound is commonly reckoned the same with Scots Troy; but is is a little heavier. The Scots Troy pound weighs 7616 English Troy grains, and the Dutch pound weighs 7633 English Troy grains.

is consequently equal to 5 stones. A peck of potatoes in Renfrewshire, is from 36 to 37 pounds avoirdupois, and in Glasgow 42 pounds.

The following tables may serve for converting the Scots weights and measures used in this county into the English standards, and also for converting the English standards into our local weights and measures.

TABLE I.

To convert Scots weights and measures into English.

To convert	Scots acres into English acres, multiply by.....	1.257
	Renfrewshire bolls for oats, into English quarters, by.....	.792
	Do. wheat measure into do. by.....	.511
	Do. pease measure into do. by.....	.559
	Scots pints into English pints, by.....	3.65
	Scots Troy lbs. into lbs. avoirdupois by.....	1.088
	Renfrewshire trone lbs. into do. by....	1.406

TABLE II.

To convert English weights and measures into Scots.

To convert	English acres into Scots acres, multiply by.....	..7954
	English quarters into Renfrewshire bolls, oat or barley measure, by	1.263
	English quarters into Renfrewshire bolls, pease measure, by.....	1.788
	English quarters into standard wheat bolls of Scotland, by.....	1.957
	English pints into Scots pints, by.....	.279
	Pounds avoirdupois into trone lbs. of Renfrewshire, by.....	.712
	Pounds avoirdupois into Scots Troy pounds by.....	.92

TABLE III.

To reduce Renfrewshire bolls to Winchester quarters.

Renfrewshire bolls; oat & barley measure.		Winchester quarters.
1	equal to	.79
2		1.58
3		2.38
4		3.17
5		3.96
6		4.75
7		5.54
8		6.34
9		7.13
10		7.92
20		15.84
50		39.59
100		79.19
1000		791.90

TABLE IV.

To reduce Winchester quarters to Renfrewshire bolls.

Winchester quarters.		Renfrewshire bolls; oat & barley measure.
1	equal to	1.26
2		2.53
3		3.79
4		5.05
5		6.31
6		7.58
7		8.84
8		10.10
9		11.37
10		12.63
20		25.26
50		63.14
100		126.28
1000		1262.77

The legal Winchester bushel is appointed by act of parliament to be a cylinder 18½ inches diameter and eight inches deep; and, in order to obtain uniformity, all measures for grain ought to be constructed of this form. The form in common use is the *frustum* of a cone, which occasions frequent errors and great inaccuracy;[a] and the calculation of the cubic content is difficult and uncertain; whereas the solid content of a cylinder is obvious.

a See Findlatter's View of the ag. of Peebles, p. 257.

By multiplying the square of the diameter by the height, and their product by the decimal fraction .000365 we have the content in such bushels: and, since a cubic foot contains precisely 1000 ounces of water, five times the square of the diameter multiplied by the height, and divided by 11, is the ounces of water: and the square of the diameter multiplied by the height, and divided by 2200 is the cubic feet in a cylinder; and the same rule may be applied in measuring round timber. These tables and rules are here inserted, merely to shew with what facility the weights and measures of this county may be converted into the known standards of England. If any reform of our weights and measures be carried into execution, and the commerce of the country certainly requires this, tables must be constructed for reducing our present weights, &c. to the new standard and its divisions; and also for reducing the new standard and its divisions to the old measures, &c.

The importance of uniformity in weights and measures over the kingdom is universally acknowledged, and much has been written on the subject of an *universal natural standard.* In France a new standard is adopted: there, in consequence of the suggestions of ingenious men, the ten millionth part of a quarter of the meridian of the earth is taken as the basis of the whole system: this was by the labours of able artists found to extend to 39.37 English inches; it is called the *metre*, or principal measure of length; and

all weights and measures are [illegible]
apprehended, and probably with very good
that, in commercial matters and in the ren-
eration of the present weights and measures
Britain, might, by producing errors and
, be attended with many inconveniences
ces: however, a total alteration is not
In a few observations on this subject,
at Edinburgh in 1781, by Dr Robinson
of natural Philosophy at Glasgow, it is
monstrated, that, uniformity may easily be
hed, and, that our present standard *troy*
is ounce, and *Winchester bushel* may all be
and, that, though these standards should
injured by time, it is possible to ascertain
in, at any future period, in any given place,
ical and philosophical precision. As the
is of very great importance, it may not be
to give a few short extracts from his pub-
which seems to have been little attended to,
ably not much known.

says, "With respect to a universal natural
that it would be attended with considera-
damage to adopt such a one as is the measure
to those weights and measures in any
the damage would be increased, if we
obtain a universal natural standard exactly

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" equal to our present measure of length, and our " present avoirdupois weight. Could this end be " obtained, much confusion and perplexity in the " adoption of weights would, without doubt, be a- " voided; and this circumstance alone would be the " most powerful inducement with the illiterate vulgar " for giving it a favourable reception, as it would " necessarily free them from the labour of calculating " the equivalent values between the old and new " weights and measures, and lessen much of that " confusion which would naturally arise from adopt- " ing standards totally different from those in present " use.

" There is a remarkable conformity, or rather " coincidence, between our present English foot and " avoirdupois ounce, viz. a cubic foot of pure distill- " ed or rain-water weighs 1000 ounces avoirdupois. " Hence the foot is a standard which will regulate " the weights; for, if the foot be divided into ten " equal parts, then, the cube of this tenth part, which " we shall denominate *inch*, will be the measure of " an ounce weight of pure distilled water; and hence " the measure of length, of capacity, and of weight, " are all deducible from one and the same standard " foot. This circumstance alone would be the strong- " est inducement to continue our present foot meas- " ure as the standard." Again, " The Winchester " quarter, or 8 bushels, is extremely near ten cubic " feet, differing from it by little more than four " 1000ths of the whole. Hence, then, our present " lineal measure of a foot, our present avoirdu- " pois weight of an ounce, and our present Win-

"chester measure of capacity, all coincide with "themselves and with the *decimal division;* a thou- "sand ounces of pure distilled water being the "measure of a foot, and ten feet or ten thousand "ounces of water being the measure of a bushel.

"The decimal division of all weights and mea- "sures, which the chamber of commerce at Glasgow "advise, has been so often recommended, and its "advantages are so obvious, that it would be need- "less to enter into an examination or detail of the "benefits resulting from it. The decimal division "would have this superior advantage over every "other, as the weights and measures would perfectly "coincide, and the same standards serve for both "throughout all the divisions and multiples. Thus, "the *measure* of a cubic inch, when filled with pure "water, would be the standard ounce *weight;* the "10 cubic inch measure would be the standard of "the 10 ounce weight, &c."

In addition to what Dr Rotheram has stated, it may be observed, that, the avoirdupois weight is so well known in every county in Scotland that it might be universally received as a standard, without the smallest difficulty, and thus all other weights would be superseded: and, with regard to measures of capacity, the Winchester bushel is the rule by which the duties of the customs and excise are collected, and is therefore perfectly familiar to the inhabitants of every commercial district: and, in agricultural districts, general consent among landed proprietors and farmers, grounded upon the act of union, has abolished old customary local weights, and substituted the

Winchester measure as a standard. In the shires of Berwick, Dumfries, Ayr, Wigton, and Stewartry of Kirkcudbright, the common measure for all kinds of grain is the Winchester bushel. In each of the three divisions of Ayrshire, there were different measures for grain which are all now laid aside, by general consent, and the Winchester bushel is substituted, by which means they can, without any troublesome calculation, compare their prices, produce, &c. with those of other districts. A proof of the expediency and practicability of one standard.

Almost every district in both England and Scotland, notwithstanding the 17th article of the union, still continues to use its old customary measures for grain, and its old weights for various commodities. "To reduce all these varieties to the legal standards "over the whole united empire, were assuredly a "most useful measure, as facilitating commercial in-"tercourse; but the means of its attainment belong "more properly to the magistrates of counties and "towns, to enforce existing legislative provisions, "than to the agricultural interest separately. Were, "however, the farmers to see their own interest "clearly in this matter, they might easily bring "about the change, if assisted generally by the magis-"tracy. All that seems necessary to effectuate the "purpose is, that the farmers should agree, and the "magistrates enforce in quarter sessions, that, from "and after a fixed day, all bargains should be made "in the standard weights and measures; that all con-"traventions of this order and agreement should be "punished by fines; and that every person continu-

"ing to possess any weights or measures differing "from the legal standards, should incur forfeiture of "these, and be subjected to penalties, increasing on "repetition."[a] And lastly, that no person shall recover the price, in consequence of any sale or contract, in any action or suit, but only according to the legal standards.

SECTION VI.—COMMERCE.

The quantity of corn raised in this county is very far short of what is necessary for the support of its numerous inhabitants, and therefore the deficiency is supplied in consequence of our commercial relations with other parts of the kingdom. In a report relating to agriculture, in a county circumstanced as that of Renfrew, where the consumption very far exceeds the produce, and where of course there is a great importation, it may be expected that something should be said respecting the quantities of grain which are annually imported, from the adjoining shires, and from foreign parts.

The grain brought into Renfrewshire is chiefly imported into Greenock and Port-Glasgow; considerable quantities are also introduced from the eastern counties by the great canal. The imports of grain at Greenock and Port-Glasgow will appear from the following tables.

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a Kerr's agriculture of Berwick, p. 440.

An abstract of the total quantity of grain and oatmeal imported into Greenock, for ten years preceding 10th October 1793, distinguishing the species and quantity of each kind of grain imported yearly.

Periods.	Barley.	Oats.	Oatmeal.	Wheat.	Wheat flour.	Beans.	Rye.
From 10 Oct. to 10 Oct.	Qr.	Qr.	Qr.	Qr.	Cwt.	Qr.	Qr.
1783 — 1784	203	15,203	7,333	0	978¼	92	3
1784 — 1785	0	15,105	39,669	6,336	40	0	0
1785 — 1786	5,579	4,041	2,021	0	0	0	0
1786 — 1787	7,290	20,697	19,174	4,159	98½	10	0
1787 — 1788	0	7,648	18,692	4,305	934½	0	0
1788 — 1789	0	17,980	0	2,861	7,206	130	0
1789 — 1790	742½	36,856	1,803	2,174	334¾	4	0
1790 — 1791	5,315	62,602	16,598	1,036	0	0	0
1791 — 1792	772	87,191	27,297	0	0	0	0
1792 — 1793	4,718	45,292	7,234	0	0	0	0
	24,619½	312,615	139,821	20,871	9,592	236	3

An abstract of the total quantity of grain and oatmeal imported into Port-Glasgow, for ten years preceding 10th October 1793, distinguishing the species and quantity of each kind imported yearly.

Periods.	Barley.	Oats.	Oatmeal.	Pease.	Wheat.	Wheat flour.	Beans.
From 10 Oct. to 10 Oct.	Qr.	Qr.	Qr.	Qr.	Qrs.	Cwt.	Qr.
1783 — 1784	224	9,071	1,917	0	0	0	0
1784 — 1785	0	13,992	7,348	0	1,730	759	0
1785 — 1786	6,162	21,299	11,981	0	0	0	0
1786 — 1787	11,535	23,174	18,295	0	1,298	0	0
1787 — 1788	581	25,720	6,202	94	1,451	510	1
1788 — 1789	140	22,164	0	0	30	480	0
1789 — 1790	1,116	8,441	15,893	0	0	0	0
1790 — 1791	470	15,057½	2,443	0	673	4	0
1791 — 1792	320	21,018	4,380	0	35	9	0
1792 — 1793	0	18,235	671	0	430	38	0
	20,551	178,171½	69,130	94	5,647	1,800	1

From these tables it appears, that the annual average of grain and oatmeal imported into Greenock and Port-Glasgow, for ten years, ending 10th October 1793, is 77,176 quarters, and of wheat flour, 1139 cwt.[a] By inspecting the tables it is obvious that oats is the species of grain of which the greatest quantity is imported, and that the importation is extremely variable. During the first of these years, the quantity of barley, oats, and oatmeal imported, amounted to only 33,951 quarters, and the importation continued nearly stationary till October 1790. After that period, there seems to have been a very rapid influx of grain; and in the year ending October 10th 1792, the importation of barley, oats, and oatmeal, increased to the almost *incredible* quantity of 140,978 quarters, equal to 178,022 bolls Renfrewshire measure; the value of

a The quantity of corn and flour imported into *Great Britain* in 1809 is,

	Qrs of grain	Cwt. of meal and flour.
From Ireland,.....	853,556	74,993
From all other countries,.....	629,202	490,945
	1,482,758	565,938

And, of foreign corn and flour, imported into *Great Britain*, from the 10th of October 1809 to the 5th of January 1810,

	Qrs. of grain.	Cwt. of meal and flour.
The quantity is,.....	217,546	72,735

which, at the then current prices of this county, amounts to £150,000, and at the present prices to £222,000. Since that period the importation of grain has probably declined.

The whole of the grain and meal thus imported, is not, however, consumed in this county. Considerable quantities are conveyed by the river Clyde to the city of Glasgow; and part is applied to the consumption of the populous banks of the Leven in Dumbartonshire. In the same manner, the grain and flour imported into Lanarkshire, by the great canal, the yearly value of which may be about £130,000, is not consumed in Lanarkshire alone. A great deal of barley, flour, beans, and oats, is conveyed by land carriage to Paisley, and other parts of Renfrewshire. The chief species of grain imported into the county in this way is barley.

The *present* state of the imports of grain and flour into *Clyde*, will be illustrated from the following abstract of the total quantities imported for one year, from the 1st of January 1810 to the 1st of January 1811.

	Quarters.	Cwt.
Barley,.....	4,294	
Oats,.....	176,131	
Wheat,.....	41,633	
Beans,.....	1,773	
Flour,.....	.....	17,303
	223,831	

Of the oats thus imported 167,900 quarters were from Ireland; and of the wheat 13,426 quarters were from Canada; the remainder of the wheat, and the barley and beans were British grain carried coastwise. The total value of the imports of grain and flour into the Clyde may be stated at £397,000.

"Before the union betwixt England and Scotland, "the merchants of the town of Greenock had some "trade to the Baltic, for timber in exchange for "herrings, and to France, Spain, and other parts of "Europe. In the year 1714 a custom house was "established at Greenock as a member of Port-Glas-"gow. From the union to the beginning of the A-"merican war, a very great trade was carried on from "Greenock, principally by the Glasgow merchants, "who were owners of almost all the ships sailing from "that port. At present the merchants of Greenock "are the principal shipholders, and carry on the "greatest part of the trade."[a]

The following is a comparative view of the state of the tonnage of the shipping from that port, in 1784, the year after peace was concluded with America; in 1791, when the Statistical account of Scotland was published; and in the year ending 5th January 1807.

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a See Statistical account, vol. v.

Comparative view of the tonnage in 1784, 1791, and 1806.

		Vessels	Tons.
In 1784.	Inward British,.....	231	21,531
	———Foreign,.....	7	1,095
	Outward British,.....	196	14,911
	———Foreign,.....	2	478
		436	38,015
In 1791.	Inward British,.....	406	39,626
	———Foreign,.....	21	3,778
	Outward British,.....	301	31,721
	———Foreign,...	14	2,390
	Coasters inward,.....	593	15,434
	———outward,.....	627	16,270
		1962	109,219
In 1806.	Inward Foreign trade,....	346	49,256
	———Coast.....do.....	354	19,751
	———Fishing vessels,...	302	10,120
	Outward Foreign trade,	326	47,710
	———Coast.....do.....	545	25,440
	———Fishing vessels,	238	8,275
		2111	160,552

But a better idea may be formed of the extent of the commerce of Greenock at the present period, and of the progressive increase of foreign trade, by perusing the following account, which contains the

total number of ships and vessels, with their tonnage, and number of men from Greenock, to and from foreign parts, and also the vessels employed in the fisheries and coasting.

To face page 210.

Account of he Port of Greenock, from and ated Voyages in the seven yea umber of Men, distinguishin

YEARS ENDI	TWARDS.					
	Coasters.			*Fishing vessels.*		
	s	Tons.	Men	Ships	Tons.	Men.
5th January 18	9	35,155	2,438	277	7,854	888
5th January 18	5	27,364	1,946	217	6,894	906
5th January 18	9	23,611	1,660	287	9,436	955
5th January 18	5	25,440	1,803	238	8,275	753
5th January 18	3	22,531	1,558	222	7,055	699
5th January 18	3	20,736	1,389	185	5,948	570
5th January 18	9	23,082	1,369	142	4,868	552

It appears that there has been great increase of foreign trade at Greenock since the commencement of the present century, the increase being near 50 per cent: but the coasting trade at this port has declined since the year 1800. This, however, is not a failure of any part of the coasting trade on the river Clyde, which upon the whole has greatly increased, but merely an alteration of the mode of carrying on the trade; many of the coasters, in consequence of the improvements on the river, now going direct to Glasgow, instead of stopping in the first instance at Greenock. This shews the beneficial effects of the works carried on by the trustees on the river, in improving the navigation as already stated. Since the year 1797 they have expended not less than £2700 per annum, in these improvements; and some estimate of the importance of their operations, and of the present state of the coasting trade, may be formed from the following facts. In 1796 the total number of vessels which came up to the bridge of Glasgow was 1326; of which there were;

	Vessels.
Under 60 tons,.....	1209,
60 and under 70 tons,	117.

Total tonnage 55,980.

Whereas the vessels in 1806, were in number 1678, and consisted of

	Vessels.
Under 60 tons,.....	1228,
60 and under 80,.....	394,
80 and under 100,.....	49,
100 and upwards,.....	7.

Total tonnage 80,683.

Being an ~~average~~ of 24,703 tons.

increase

A farther evidence of the extent of the trade of Greenock, may be drawn from the following tables, containing the duties on customs, and duties on excise, for seven years from 1803 to 1810.

Account of the total amount of the duties of customs received at the port of Greenock in the seven years ending 5th January 1810.

Years ending.	Total duties.		
	£.	s.	d.
5th January 1804,	208,490	12	0¼
5th January 1805,	248,674	17	8
5th January 1806,	272,973	4	6¾
5th January 1807,	369,433	10	11¾
5th January 1808,	355,095	9	11¼
5th January 1809,	326,104	17	6¼
5th January 1810,	489,275	3	3¼
	2,270,047	16	0½

An account of the excise duties paid at the port of Greenock from 5th July 1803 to 5th July 1810.

5th July to 5th July	£.	s.	d.
Amouut duties from 1803—1804,	50,232	14	0¾
Do.....do.....1804—1805,	53,113	12	8½
Do.....do.....1805—1806,	87,400	12	11½
Do.....do.....1806—1807,	194,428	6	3½
Do.....do.....1807—1808,	206,636	16	1½
Do.....do.....1808—1809,	224,478	4	9½
D... ... ..do.....1809—1810,	221,854	17	5
	988,145	4	3¾

The revenue arising from the Post office may also be stated, and is a decisive proof of the extensive transactions of the merchants of this rising town. In the year 1797, when the present post master entered upon his office, the annual revenue was £2800, and in the present year, (1811) it amounts to £5300, so that this branch in 14 years has nearly doubled.

A farther evidence of the great prosperity of the town of Greenock may be inferred from the state of their docks and harbours. In the year 1700 the inhabitants petitioned the parliament of Scotland for a fund to build their harbour, but their petition was refused. However, in consequence of a contract with Sir John Shaw their superior, and a voluntary assessment, the harbour was begun in 1707, the expense of which amounted to £5600; a great debt at this early period of their trade. After this the commerce of the port increased so rapidly, that in the year 1740 the whole debt was extinguished, and there remained a surplus of £1500. In conseqence of an act of parliament of 1773, a dry dock was begun in the year 1783, and farther improvements continued to be made on the harbour, in consequence of an act in 1789; and the trade still advancing, two acts of parliament were obtained in 1801 and 1803 for building new piers, quays, ware-houses and dry docks for graving and repairing vessels. The expense of the improvements of the harbour were estimated by Mr Rennie, at £51,567, and the trustees or commissioners appointed by act of parliament, have already executed a great part of these undertakings, at the expense of above £50,000. In the year 1810

the powers of the several acts for the improvement of the town and harbours of Greenock, were, in consequence of a bill brought into parliament, altered and enlarged; and two new graving or dry docks are now projected at the east quay, which are estimated by Mr Rennie at £36,455.

These improvements have greatly increased the revenue from the docks and harbours, as will appear from the following statement.

	Year.	£.	s.	d.
The fund from the harbour was in.....	1783	111	4	8
In the year.....	1792[a]	812	9	0
The average revenue for six years was, from 5th January..... to 5th January.....	1803 1809	2547	19	8
And the revenue was, for the year ending 5th January.....	1810	4219	14	5

The other revenues of the town for the purposes of supplying the inhabitants with water, lighting and paving the streets, &c. amount to from £1500 to £2000 per annum.

The inhabitants in Greenock rapidly increased during the last fifty years. The information concerning the population at early periods, and by late surveys is correct, authentic, and copious.

a See Statistical Account of Scotland, vol. v.

				Souls.
According to the survey for the purposes of a general poll tax[a] in 1695, there were 367 families, and estimating 4½ for each family, the numbers are.....				1,651
By a survey made in 1735, there were infants under 8 years of age,..... 751 persons above 8 years of age,.....3349				4,100
The return to Dr Webster was in 1755....				3,858
Population[b] in.....1781...				12,000
	Years.	Males.	Females.	
By the Statistical account, exclusive of persons at sea, in...	1792	6766	7,533	14,299
By the survey in.....	1801	8196	9,262	17,458
And by the survey in.....	1811	7978	11,064	19,042

From this table of the population it appears that the increase of inhabitants has been as follows:

From		Males.		Fem.	Total.
1791 to 1801	Increase	1430	Increase	1729	3159
1801—1811	Decrease	218	Increase	1802	1584
Total increase in 20 years.		1212		3531	4743

a See pages 92 and 93.
b Semple's Continuation of Crawford's Renfrewshire.

The high rents paid for land, particularly for small portions of garden ground, have been already stated.[a] It may be added, that some portions of land in the immediate neighbourhood of the town, though possessing no high degree of fertility, are let, for ordinary cultivation, at £10 or £11 per acre. The sale of property, in central situations and in small allotments for building, being limited, the price is in many cases consequently very high, being £100 per fall, or £16,000 per acre. And, even at the extremity of the town, lots of land are sold at from £4000 to £5000 per acre, burdened with a yearly feu-duty of £24 per acre.

The short detail of facts and circumstances now given of this sea-port, clearly shews its high importance in the commerce of the country. Its nearness to the western entrance of the Forth and Clyde Canal, renders it an important depot from whence colonial produce may be easily transported to the north of Europe. The merchants of Greenock, although sensible of this advantage, were so pressed for want of ware-houses, that it became necessary to introduce into the acts of parliament lately obtained for the improvement of the town and harbour, clauses impowering the magistrates and town council, as trustees or commissioners, to erect warehouses for depositing goods and merchandize, in front of the breast of the new harbour. A great extent of these buildings has been already executed, on such a scale as fully to accommodate the trade, and give superior

a See pages 71 and 114.

safety to the interests of the revenue. The series of acts of parliament for improvements at this seaport, and the progress already made in their execution, evince the public spirit in which they originated, and the persevering exertions of the commissioners for their speedy completion.[a]

The commerce of *Port-Glasgow* is similar to that of Greenock, but on a less extensive scale. The shipping *belonging* to that port in 1792, as taken from the custom house books, was;

	Vessels.		Tons.
Employed in foreign trade,	91	measuring	11,273
——in coasting trade,	18		692
——in herring fishery,	16		795
	125		12,760

These belonged partly to merchants in Port-Glasgow, and partly to mercantile houses in Glasgow. The trade at this place, is by no means carried on solely by the vessels belonging to it.

a The state of the fisheries, imports and exports, and of the manufactures carried on at Greenock, and management of the poor, &c. shall be afterwards noticed.

From the custom house books it appears, that the vessels to and from the port in the year 1790, were;

	Vessels.		Tons.
Inward British,.....	205	measuring	19,776
———Foreign, ...	13		2,469
Outward British....	221		22,466
————-Foreign,	11		1,849
	450		46,560

The commerce at this port has been greatly extended during the last twenty years, and particularly since the commencement of the present century. This will be illustrated by the following table, where the progressive rise of the trade is obvious.

Account of the number of ships and vessels which have traded at Port-Glasgow, to and from foreign parts and coastwise, including their repeated voyages, with their tonnage and number of men, during the years 1803, 1806, 1807 and 1810.

Year ending 5 Jan.		Ships.	Tons.	Men.
1804	Inward foreign trade,.....	113	18,722	1081
	———coasters,.....	182	7,226	551
	Outward foreign trade,.....	177	25,137	1692
	————coasters,.....	119	7,202	424
		591	58,287	3748
1807	Inward foreign trade,.....	114	19,446	1181
	———coasters,.....	182	9,273	589
	Outward foreign trade,.....	200	26,168	1867
	————coasters,.....	152	10,063	606
		648	64,950	4243
1808	Inward foreign trade,.....	143	22,424	1891
	———coasters,.....	162	8,683	456
	Outward foreign trade,.....	214	28,637	1948
	————coasters,.....	193	12,871	755
		712	72,615	5050
1811	Inward foreign trade,.....	176	31,159	2045
	———coasters,.....	161	8,772	510
	Outward foreign trade,.....	188	30,800	2204
	————coasters,.....	247	16,612	806
		775	87,343	5565

From this table it appears, that although the coasting trade, in consequence of improvements in deepening the Clyde towards Glasgow, as already mention-

ed,[a] is not much increased, yet the foreign trade has advanced at least 40 per cent, in the course of the last seven years. It may be also remarked that the vessels in foreign trade, are now of larger dimensions than formerly. Hence their numbers do not keep pace with the increased tonnage.

The extent of commerce may be inferred, from the total duties of customs received at this place, which for the year ending 5th January 1807, amounted to.....£252,408 5 10
For the year ending 5th Jan. 1811, £307,187 6 1

The improvements at Port-Glasgow have kept pace with its rising trade. The merchants are accommodated with extensive ware-houses, for West India produce; and large ponds for the reception of imported timber. The magistrates and council of the city of Glasgow, who are trustees for the *harbour*, have expended, within the last ten years, above £15,000, in deepening and cleaning the harbour, and in extending the quays; and, although a debt is incurred of £10,000, farther improvements are still going on. The same rates of tonnage-duty as at Greenock,[b] are levied, with this difference, that at Port-Glasgow, the Irish and coasting trade pay one

a See page 211.

b The rates of tonnage or duties for the harbour at Greenock, and also the rates for the use of the dry dock, are fixed by acts of parliament. See 11 & 12 Geo. III. c. 28. and 43 Geo. III. 87.

penny per ton less than at Greenock. The rapid increase of revenue from this harbour, stands thus;

Revenue from the harbour of Port-Glasgow.

Year ending	£.	s.	d.
5th July 1802,	1388	8	9
5th July 1804,	1179	6	6
5th July 1806,	1172	15	5
5th July 1808,	1326	6	0
5th July 1810,	1898	19	2
5th July 1811,	2011	9	1

The revenue of the post office for eight years is as follows;

Year ending	£.	s.	d.
5th Jan. 1805,	789	7	5
5th Jan. 1806,	851	7	4
5th Jan. 1807,	951	17	6
5th Jan. 1808,	1031	7	4
5th Jan. 1809,	992	9	11
5th Jan. 1810,	1069	16	7
5th Jan. 1811,	1208	8	4
5th Jan. 1812,	1268	15	8

The first *dry or graving dock* in Scotland, was built by the magistrates and council of the city of Glasgow, about the year 1760. A very few years ago, they sold it to the magistrates and town council of Port-Glasgow, who have expended, in two years, £2000 in deepening and improving it: and although

the original rates have never been raised, the revenue now exceeds £500 per annum, after deducting ordinary expenses. The revenue which this dock afforded to the city of Glasgow, in 1802, before it was sold, amounted to £230 12*s.*

The other revenues of the town, arise chiefly from a tax of 2½ per cent upon house rents; and from the market and harbour dues, &c. as mentioned in the Statistical Account [a] of this parish, and amounted prior to 1792, to about £500 a-year: but in consequence of an act of parliament of 1803, increasing the tax on house rents to 5 per cent, the revenue is greatly advanced.

Population.—In the year 1668, the city of Glasgow purchased from Sir Patrick Maxwell of Newark, about 22 English acres of land, contiguous to the old village and bay of Newark, where they afterwards built their harbour, which they called Port-Glasgow, and feued out streets and lanes for a new town, where the seat of the custom house for Clyde was fixed. The burgh of barony of Port-Glasgow,[b] and bay of Newark, and a few farms in the immediate vicinity, were disjoined from the parish of Kilmalcolm in 1694, and formed into a distinct parish comprehend-

a See Statistical Account, vol. v. p. 553.

b Port-Glasgow, which was erected into a burgh of barony by Charles II, and Newark the original village, from their contiguity, formed one town. In the year 1774, the feuars of both applied to parliament, and two baillies, with a council of eleven persons, were appointed to manage the police of the town. The feuars in Port-Glasgow continue to pay small feu-duties to the city of Glasgow as their superior, amounting in all to £51 5*s.* 6*d.*

ing 671 Scots acres. The population as may be easily gathered from the list of families for the general purposes of a poll tax; and also from the Statistical Account of Scotland, only amounted at that time to 375; and even when the present church was built in 1718, did not exceed 800 persons.

At subsequent periods the numbers stood thus;

	In			Persons.
Population according to the Statistical Account, vol. v. p. 547, 548 and 549.	1730	.....		1426
	1740	.....		1560
	1755	.....		1695
	1760	.....		2600
	1783	.....		3894
	1790	.....		4036
		Males.	Females.	
By the surveys under the population acts.	1801	1748	2117	3865
	1811	2322	2794	5116
Increase in the last ten years,		574	677	1251

The country part of the parish, consists of only eight small farms, containing seventy-four persons.

Rent and value of property.—The barony of Newark, which, when the city of Glasgow built their harbour, belonged to Sir Patrick Maxwell, became afterwards the property of Robert Hamilton Esq. of Wishaw, and his son, Lord Belhaven, is the present superior. The village of Newark, and

the ground allotted to the city of Glasgow, having been feued by Sir Patrick Maxwell, the remaining low grounds, were feued by the late Mr Hamilton, about the year 1767, into lots for gardens, from a rood to an acre each, at the rate of £40 per acre and £2 of annual feu-duty; and a considerable part of the high grounds, was feued in larger portions, at half these rates. Within these few years, the same low ground has been sold, still burdened with the annual feu-duty of £2 per acre, at from £640 to £1300. All the low lands both on the east and west of the town, and even some of the rising grounds, are thrown into gardens and orchards, which not only supply Port-Glasgow and Greenock with fruit and vegetables, but occasionally afford fruit to the Glasgow market. The rents paid for such garden grounds, though in general stocked with only goosberries, currants and strawberries, on short leases, are from £20 to £25 per acre; and when they are minutely divided into lots of less dimensions than a quarter of an acre, rents have sometimes been obtained, to the amount of £40 per acre, evincing how suitable the climate is for fruit, as already mentioned.[a] Some grass lands in the vicinity of the town are rented at fully £10 per acre.

Herring fishery at Greenock.—Crawford, who wrote his history of Renfrewshire in 1709, mentions the importance of the herring fishery, the laws by which it was regulated, and the extent to which

a See page 114.

it was prosecuted. He observes, "that the herrings which are caught are larger, firmer and of "a better taste, and take better with the salt than "any other the kingdom affords, and are more valued, both fresh and salted, at home and abroad." When the fishing was considerable on the river Clyde, he states, that there have been about 900 boats employed in catching herrings, each boat having on board four men and twenty-four nets. "There "was," he adds, "about the year 1670, a company erected, which employed a considerable stock "of money for curing herring; and because his Majesty King Charles II. put in a share of the stock, "they were called the royal company: they built a "large house at Greenock, and made that place the "seat of their trade, where they had large cellars "for keeping their salt and herrings till exporting. "By this erection, none except that company were "allowed to cure herrings before the 20th of September yearly; which being represented to the government, as a very hard restraint upon the merchants, the company was dissolved in 1684, and "their houses at Greenock being exposed to roup, "were purchased by the magistrates and town council of the city of Glasgow." The property is still retained by them, bears the name of the Royal-closs, and affords a rent of £290 a-year. He farther observes, that the number of herrings taken in the frith of Clyde some years is almost incredible, that besides the home consumption, large quantities were exported to foreign markets, and that in the year 1674, in particular, 20,000 barrels were exported to Rochelle,

besides what were sent to other ports of France, to Sweden, to Dantzic and other places on the Baltic; and he concludes by stating that excellent red herrings were dried at Crawford's-dike situated at the east extremity of Greenock.

The merchants in Greenock, justly considering the herring fishery as of great importance, continue to prosecute this branch of industry, chiefly in the neighbouring lochs. By act of parliament in the year 1750, a bounty was granted to herring fishers, of 30*s.* per ton, which in 1757 was extended to 50*s.*; and in 1771 with some alterations, reduced to 30*s.* In the year 1791, there were cleared at the custom house at Greenock and out-ports, 129 vessels, on board of 88 of which there were 938 men; and, besides the herrings which were sold for immediate consumption, there were entered from the 5th of January 1791 to the 5th of January 1792;

	Bar. Herrings.
At the port of Greenock,[a]	45,054
At Port-Glasgow,.....	8,434½
Total barrels of herrings,	53,488½

The herring fishery has gradually declined at Port-Glasgow, and there are now no vessels belonging to that town employed in this trade. But, from a preceding table[b] it would appear, that the fishing ves-

a See Statistical Account, vol. v. p 579.
b See page 202.

sels of Greenock have some years amounted to nearly 300, consisting of about 10,000 tons of shipping, and employing about 1000 men: and though for a few years this trade has declined, and is in fewer hands than formerly, yet this last season (1811) there has been a successful fishery.[a]

The *Whale fishery* from Clyde has not been prosperous. It was first attempted in 1752, when several ships were sent to Greenland, but was soon given up. It was again revived in 1786 when five large vessels from Greenock and Port-Glasgow, well equipped and commanded by men of experience in the business, sailed from Clyde: but in consequence of unsuccessful fishing, and the low price of oil, the trade was gradually abandoned. One of the ships belonging to Port-Glasgow, persevered till 1794, but the parties concerned sustained considerable losses. The merchants at Greenock, either from the rise of prices or other favourable circumstances, have lately resumed the trade, two ships being fitted out in 1811, which it is hoped have been so successful, as to induce the owners to persevere.

The Newfoundland and Nova Scotia fisheries are prosecuted extensively.

Imports and Exports.—The union with England in 1707, opened new views to the traders of Glasgow, by giving them a free commerce to America and the West Indies, which they had not before en-

a An account of the present mode of carrying on the herring fishery, is given in the Agricultural Survey of Dumbartonshire, pages 285 and 338.

joyed: and they soon began to send out goods to the colonies, returning chiefly with tobacco. Having no ships of their own, they at first employed English vessels, and it was not till 1718, that a ship, the property of Glasgow, crossed the Atlantic. The jealousy of merchants in London, Bristol, Liverpool, and Whitehaven, and their attempts to frustrate the enterprizes of the merchants on the Clyde, occasioned the decline of this trade, until about the year 1735, when it again revived, but not with its former vigour. After that period it advanced very slowly, till the middle of the last century, and from thence it increased annually till the American war. The importation of goods from America and the West Indies, by the merchants in Glasgow and Greenock, in the year 1775, was as follows;

Tobacco from Virginia,.....	40,854 hogsheads.
———from Maryland,	15,040 do.
———from Carolina,...	1,249 do.
Total,	57,143 do.
Sugar from Jamaica and the West India Islands,	4,621 hogsheads. 691 tierces. 462 barrels.
Rum,.....	1,154 puncheons. 193 barrels.
Cotton,.....	508 bags.

The separation of America, induced the merchants on the Clyde to extend their commerce to the West Indies, and to the continent of Europe, more

than formerly, and also to extend the coasting trade, so that the shipping increased as already stated,[a] far beyond what it was at any former period. They continued to import from the West Indies, rum, cotton, sugar, coffee, dye-woods, &c.:—from America, rice, naval-stores, pot-ash, cotton, tobacco, &c.: and from Spain, Portugal, and the Mediterranean, wines, fruit, &c.—Besides the imports of grain which have been already noticed,[b] there were imported for the year ending 5th January 1791, the following quantities, of the general articles annexed;

Sugars,.....	81,074 cwt.
Cotton,.....	1,757,504 lbs.
Rum,...	221,649 gallons.
Wines,.....	744 tuns.

But the *imports* and extent of the trade of Clyde, will be better understood by perusing the following table, which illustrates the present state of the commerce, not only of the towns of Port-Glasgow and Greenock, but also of the city of Glasgow.

a See tables in pages 209, 210, and 219.
b See pages 205, 206, 207, and 208.

Table of the imports into Clyde, for six years, from 1804 till 1810, on which duties were paid for home consumption or otherwise;

		1804.	1805.	1806.	1807.	1808.	1809.
Rum, Jamaica,	Gallons,	182,348	96,949	146,908	205,787	261,993	197,788
——Leeward,	Do.....	44,438	32,216	8,297	12,801	24,481	39,821
Sugar,.....	Cwts....	219,432	226,756	335,450	347,015	346,779	405,217
Coffee,.....	Cwts....	5,802	12,763	17,488	18,353	29,846	31,128
Pimento,.....	lbs.....	12,306	11,931	25,723	20,862	12,640	11,785
Indigo,.....	lbs.....	30,906	20,327	37,328	63,623	50,999	136,336
Cotton Wool,...	lbs.....	8,023,049	8,720,029	9,162,041	12,718,548	3,728,513	8,457,740
Logwood,.....	Tons,....	744	745	867	1,509	753	939
Fustic,.....	Tons,....	460	493	315	345	396	710
Wine, Port,.....	Gallons,	39,931	68,996	65,734	60,116	64,986	54,307
——Spanish,.	Do.....	none	8,861	4,279	6,975	14,621	45,517
——French,..	Do.....	none	469	297	none	187	none
Tar,.....	Lasts,....	286	107	647	355	46	444
Turpentine,.....	Cwts.....	5,963	9,822	2.853	1,602	503	1,903
Staves,.....	M.....	9,538	5,251	6,424	5,396	1,826	3,311
Cocoa,.....	Cwts.....	24	3,499	390	408	87	140
Brandy,.....	Gallons,	none	none	none	133	7,572	none

The river Clyde, as has been already mentioned,[a] is navigable to the bridge of Glasgow, where the Broomilaw-quay, belonging to the city of Glasgow, is situated. Although this city and harbour belong to Lanarkshire, yet it may not be improper, to mention some farther circumstances relating to the trade of this part of the river, particularly as no notice has been taken of the commerce carried on here, in the agricultural survey of that county. In the year ending 10th July 1810, the number of vessels which arrived at the city of Glasgow, were 2021, exclusive of many small boats, under 15 tons burden, which convey herrings, ling-fish, fruit, &c. of which no account is taken. Of these 2021 vessels, there were;

	Vessels.	Tons.
Under 60 tons,.....	1279	50,372
60 and under 80,...	633	41,580
80 and under 100,	99	8,281
100 and upwards,...	10	1,083
Total,	2021	101,316

So that the tonnage has nearly doubled in fourteen years.

During the year now alluded to, only four vessels arrived from foreign countries, viz. from Gottenburgh, New York, Newfoundland and Jersey. The

a See page 30.

trade to the different ports in the empire will appear from the following:

Table of arrivals at the bridge of Glasgow from 10th July 1809 to the 10th of July 1810.

	Vessels.	Tons.
From foreign countries as above mentioned, ...	4	335
From the different ports in Ireland,.....	258	15,215
From Liverpool,.....	147	9,866
From Lancaster,.....	12	867
From Bristol,.....	13	693
From other ports of England and Wales,.....	30	1,627
From the Highlands and Islands of Scotland, and from the coasts of Ayrshire, Wigton, &c.....	1557	72,713
Total,	2021	101,316

The imports are: From Ireland;[a] oats, wheat, linens, yarn, butter, beef, limestone, soaper's-salts, kelp, &c.—From Liverpool and other ports of England and Wales; West India produce, fruits, tanner's-bark, tin-plates, iron, iron-ore, manganese, &c. —From the Highlands and Islands of Scotland; herrings, ling-fish, tanner's bark, slates, kelp, lead, &c.

a Ninety-four of the above mentioned vessels from Ireland were loaded with oats.

and from the counties of Ayr, Wigton and Dumfries; wheat, oats, oat-meal, potatoes, &c. Without taking into view the vessels arriving at Renfrew, Paisley and Dumbarton, where the coasting trade is very inconsiderable, a correct idea may be formed of the commerce on the Clyde from the following recapitulation of the arrivals at Greenock, Port-Glasgow, and the city of Glasgow, for one year.

Arrivals at Greenock, for one year ending 5th Jan. 1810.				
	Vessels	Tons.	Vessels	Tons.
From foreign parts and Ireland,.....	433	60,936		
Coasters,.....	363	19,168		
Fishing vessels,.....	151	5,486		
			947	85,590
Arrivals at Port-Glasgow, for one year ending 5th Jan. 1811.				
	Vessels	Tons.		
From foreign parts and Ireland,.....	176	31,159		
Coasters,.....	164	8,772		
			340	39,931
At the city of Glasgow, for one year ending 10th July 1810.				
	Vessels	Tons.		
From foreign parts and Ireland,.....	262	15,750		
Coasters,.....	1759	85,566		
			2021	101,316
Total for one year,			3308	226,837

The *Salmon fishings* on the Clyde, as already stated,[a] are very inconsiderable, seldom affording above £200 a-year. Fishing with stake nets, on part of the river between West ferry and Port-Glasgow, has been lately attempted, both on the Dumbartonshire and Renfrewshire sides of the Clyde, and the success by this mode is fully proved. For in one year there were caught 2300 salmon, and 2000 gilshes and other small fish, the gross value of which was about £1800: and the proportion belonging to Renfrewshire was about a third of the whole. The expense of nets and stakes is very considerable: and the effect of this mode of fishing will be a diminution of the numbers of fish caught in the upper part of the river.[b]

The *exports* from Greenock and Port-Glasgow, to America and the West Indies, are manufactured goods of Glasgow and Paisley; also coals, fish, &c. To the continent of Europe, (besides British manufactures) sugars, coffee, rum, and other West India produce. The coasting trade is carried on to all the ports in Ireland, and to the west of England; and the Forth and Clyde canal has opened an extensive trade to the east coast of Scotland, and to Hull, Newcastle, and London.

But though thus favourably situated, there are at present (Dec. 1811) in the bonded warehouses of Greenock and Port-Glasgow, considerable quantities of wines and rum, and the following articles;

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a See page 30.

b See Dumbartonshire Report, page 283.

British plantation sugars,	109,465 cwts.
Foreign sugars,..	42,162 cwts.
Coffee,.....	85,243 cwts.
Cotton,.....	662,759 lbs.
Tobacco,... 2,289,202	lbs.

Deprived of the accustomed intercourse with the continent of Europe, and having on hand such quantities of colonial or foreign produce, the merchants with anxiety direct their views to new and distant channels for commerce, in the humble confidence that the period may soon arrive when the legislature may feel it to be wise policy to lay open the traffic to the Indian ocean.

SECTION VII.—MANUFACTURES.

Renfrewshire has been the seat of manufactures for a considerable period. In all the great towns and villages of this populous county, a variety of manufactures are at present conducted on a most extensive scale, and it will be proper to give some account of their origin and progress.

In sea-port towns, like Greenock and Port-Glasgow, where capital and industry are directed to foreign and coasting trade, few manufacturing establishments exist. But a commerce of the magnitude already stated, must necessarily give rise to domestic manufacture connected with the traffic of the ports on the Clyde. Accordingly we find that in the year 1725 a

rope work, and sometime afterwards a sail-cloth manufacture were established at Greenock, where these branches were carried on extensively, together with the making of nets for the herring fishery.—At Gourock, a village in the adjoining parish of Innerkip, in the year 1772 a rope-work commenced, which in 1792 employed forty-nine people, and usually manufactured about 165 tons of hemp yearly into ropes and cordage, and is still well conducted. And at Port-Glasgow there have been extensive works for about seventy years, for the manufacture of ropes and sail-cloth: and to these works there has been recently added a large flax mill, wrought by a steam engine, for spinning yarn for canvass. In the year ending August 1811, there were manufactured at this establishment;

Cordage to the amount of about	£22,000
Sail-cloth from rough flax,.....	£20,000
Tow-yarn, sent to Dundee,.....	£ 1,100
	£43,100

At each of these towns the boiling or refining of sugars is carried on very extensively. At Port-Glasgow alone there are four sugar houses belonging to three different companies, which are frequently very fully employed: and when this is the case, they boil upwards of 3000 hogsheads of sugar yearly, which at £45 per hogshead, the average price for the last five years, is, £135,000 for the raw material alone.

It would be difficult to enumerate all the different

branches of manufacture, and impossible to ascertain their extent. It may be observed, that there are extensive breweries carried on for exportation and home consumption.—Founderies for cast-iron goods. —Establishments for cooperage, rendered extensive in consequence of the herring fishery:—also for blacksmiths, particularly at Port-Glasgow, where anchors are made of the largest size;—and the making of soap and candles;—manufacturing bottles or green glass;—tanning and preparing leather, are all carried on in this part of Renfrewshire.

Ship-building.—Before the American war, all the large vessels belonging to Clyde, were built in America; but since the peace of 1783, ship-building has gone on with much success in the ports of Clyde. At Port-Glasgow there are three ship-builders' yards well stocked with timber, where vessels are built of considerable burthen and of good construction.—And at Greenock this important business has for a considerable time, been most ably conducted, and a suitable capital employed. The largest merchant vessel ever built in Scotland was launched there in the year 1792. She belonged to a company in that town, who had a contract with government, for supplying the royal-navy with masts from Nova Scotia.

At Renfrew, the county town, there are no manufactures worthy of notice. It is an ancient burgh, was erected into a royalty by Robert III. in 1404, when Renfrewshire was disjoined from the county of Lanark; and was, in the Scots parliament, the thirtieth in number as to precedency among the

burghs, and ranked immediately after Dumbarton and before Dunbar. Although the situation is most favourable both for trade and manufactures; and although, as Crawford states, this burgh had once some little foreign commerce; and in his time (1710) was mostly employed in trade to Ireland, yet it continues nearly stationary, and is less considerable than many of the villages recently built in this county.—Some feeble attempts were made, in the years 1781 and 1782, to introduce at this burgh the manufacture of Lisle thread, and Brussels lace, but these were unsuccessful.—In 1792 there were one bleachfield—a soap and candle work—a very few thread mills—and about 120 looms, chiefly employed by manufacturers in Paisley—and the present circumstances of the brugh are very little meliorated: neither their manufactures, nor their traffic on the Clyde, which consists chiefly of grain, being much extended. Considerable quantities of tanners'-bark, are occasionally imported at this place by traders in Paisley, from the south west of England and the Highlands of Scotland.

The population is increasing slowly, as follows;

In 1791 the numbers were 1013
1801.....about 1400
1811.....1637
Increase in twenty years,.....624

The revenue of the post office at this place is £117 per annum. The yearly revenue of the burgh is about £800, and arises from the rents of lands, sal-

mon fishings, and a public ferry. The ferry, as already stated,[a] is particularly convenient, and the provost and magistrates of this royal burgh, have most laudably consulted the comfort and safety of the public, by furnishing boats of most excellent construction, at great expense.

The chief manufactures of the county have been carried on at *Paisley* and its environs, and in the numerous villages connected with this populous town. It was erected into a burgh of barony, in favour of George Shaw abbot of Paisley and his successors, by James IV. in the year 1488, and a charter was granted to its magistrates by the abbot in 1490: and the possessions of the abbey having been erected into a temporal Lordship, as already mentioned,[b] that charter was confirmed to the magistrates in 1658 by the Lord of erection, who disponed to them the superiority and common lands, all which grants were in the year 1665 confirmed by a charter from the crown. The magistrates have therefore every privilege of a royal borough, excepting representation in parliament. Crawford describes it in 1710, as consisting of only one principal street, about half a mile in length, with several other lanes, and it is probable the population did not then exceed 1500 souls. With regard to manufactures, his words are, "That "which renders this place considerable, is its trade "of linen and muslin, where there is a great weekly "sale in its markets of those sorts of cloth; many of

a See page 185.
b See page 55.

"the inhabitants being chiefly employed in that sort "of manufactory." It is certain however, that the manufactures of Paisley, which consisted at that time chiefly of Bengals, in imitation of striped muslins; and coarse linen checks, were very limited; for we find that more than thirty years after this period, there were only 867 looms employed,[a] and the whole value of their manufactures, though far more elegant fabrics had been introduced, only amounted to £15,000. At this time the kinds of goods manufactured were checkered linen handkerchiefs, some of them fine and beautifully variegated, by the manner in which the colours were disposed; which were succeeded by goods of a lighter texture, such as lawns, some of them plain, and others striped or checkered with cotton, and others spotted or figured, according to the taste or fancy of the artist. The weaving of linen gauze was also carried on to considerable extent. About this period the manufacturers, or merchants connected with them, resorted occasionally to England for the sale of their goods, particularly to fairs, such as are still held at Chester for the sale of Irish linens and Welsh flannel, &c. The extent of manufacture, of these different kinds of goods about the middle of last century, seems to have been about 600,000 yards, and the value about £40,000. By the good taste of the manufacturers, and the ingenuity of the weavers in this district, fabrics from the loom were still farther varied and improved, so that the manufacture of linen goods of these descriptions

a See Statistical Account, vol. vii. p. 85.

gradually increased, till at last between the years 1778 and 1786, there were manufactured annually from a million and a half to two millions of yards, the values of which were, from £90,000 to £165,000. From that time this manufacture, being superseded by cotton goods, as shall be afterwards explained, constantly declined till at length it is now nearly extinct. The rise and fall of this manufacture will be best illustrated by a few extracts, from the accounts transmitted annually by the stamp masters, to the board of trustees at Edinburgh, for the encouragement of manufactures in Scotland. It is the duty of the stamp masters appointed by the board, to give an annual account of all linen goods stamped by them; and the following table exhibits the quantities in different years, with their total value.

From 1 Nov. to 1 Nov.	Yards.	Value.		
		£.	s.	d.
1743—1744	353,407	15,886	15	10
1747—1748	413,660	23,671	19	7
1749—1750	567,805	41,710	0	0
1757—1758	649,998	43,665	8	11
1767—1768	529,022	54,664	12	11½
1769—1770	632,834	64,547	19	6
1778—1779	1,621,652	86,400	17	5½
1780—1781	1,248,843	105,930	19	10¼
1783—1784	1,922,020	164,385	16	6½
1806—1807	660,346	27,771	10	9
1807—1808	299,188	16,774	5	10
1808—1809	42,596	6,856	13	6
1809—1810	40,503	4,833	17	6
1810—1811	62,450	4,513	0	3

From this table, and from a farther examination of the stamp masters' books, it appears, that this branch of manufacture was at it greatest height during the years from Nov. 1781 to Nov. 1784; the number of looms being above 2000, and the value of the goods manufactured in those three years, £465,003 2*s.* 4*d.*, average £155,001 0*s.* 9*d.* per annum.[a]

Silk gauze manufacture.—It is well known that at the revocation of the edict of Nantz in 1685, about half a million of most useful and industrious subjects having emigrated from France, introduced many arts and manufactures into Britain; that numbers settled in London, and established the manufacture of silk goods in Spittalfields. Soon after the middle of the last century, when the traders in Paisley had increased their small capitals, they occasionally went to London, where the light fabrics or *fancy lawns* were vended, and directed their skill and ingenuity to the imitation of the silk gauzes of Spittalfields. The first attempts were in the year 1759; and, in consequence of the taste and industry of the merchants, and the talents of the workmen, their success was complete; and the result was, that elegant and richly ornamented silk gauzes were manufactured in great variety, so as to surpass any thing of the same

a The particulars relative to the manufactures of Paisley, as stated by the Rev. Dr Snodgrass in the Statistical Account, were communicated by a gentleman of that town; who published a full account in the Gentleman's Magazine for 1787, and in the Scots Magazine for 1806, of the state of manufactures at Paisley at different periods.

kind which had been produced. The success of the manufacture brought several companies from London to Paisley; and a general mourning taking place in 1760, when the use of Indian muslins was adopted by people of fashion, the thread gauzes of Paisley being no longer in demand, numbers of weavers were of course thrown idle. The consequent reduction in the rate of labour, induced other English companies to settle in Paisley; and in less than twenty years it became the distinguishing manufacture of that place: the traders who were engaged in it had their weavers employed in every town and village of Renfrewshire, and in the villages of the neighbouring counties to the distance of twenty miles: they not only had warehouses in London and Dublin, but employed persons in the city of Paris and other great towns on the continent for selling their goods. In the year 1781, there were about twenty houses in Paisley engaged in the silk gauze manufacture, of which number about one third was from London. They employed 5000 looms, and produced yearly £350,000 worth of silk goods. The manufacture of ribbons and of some other silk fabrics was introduced in 1772, and was for some time carried on to a considerable extent. It is now, however, almost wholly relinquished; and there are at present not above a dozen of looms employed in the manufacture of silk goods of any description. The introduction of cotton spinning and the weaving of muslins, directed the attention of our traders to new schemes of industry, and put an end to the manufacture of silk gauzes which were no longer fashionable.

Before entering upon the cotton manufacture, it may be proper to take notice of another branch of earlier commencement which has been long successfully prosecuted in Paisley, namely, the manufacture of *thread;* the origin of which is given by the Rev. Dr Young in the Statistical Account of the parish of Erskine. He observes, that

"One of the last trials for witchcraft which happened in Scotland, had its origin in this parish in "1696—7. The person supposed to have been bewitched, or tormented by the agency of evil spirits, or of those who were in compact with them, "was Christian Shaw,[a] daughter of John Shaw of "Bargarran, then about eleven years of age. A "short account of this trial may be seen in Arnot's "collection of criminal trials. Three men and four "women were condemned to death as guilty of the "crime of witchcraft, and were executed at Paisley. "This may furnish ample matter of speculation to "those whose object it is to trace the progress and "variation of manners and opinions among men. "The subsequent history of this lady is, however, "more interesting to the political enquirer.

"Having acquired a remarkable dexterity in spinning fine yarn, she conceived the idea of manufacturing it into thread. Her first attempts in this "way were necessarily on a small scale. She executed almost every part of the process with her "own hands, and bleached her materials on a large

a Afterwards married to the Rev. Mr Miller, minister of Kilmaurs in Ayrshire.

" slate placed in one of the windows of the house.
" She succeeded, however, so well in these essays
" as to have sufficient encouragement to go on, and
" to take the assistance of her younger sisters and
" neighbours. The then lady Blantyre carried a
" parcel of her thread to Bath, and disposed of it
" advantageously to some manufacturers of lace, and
" this was probably the first thread made in Scot-
" land that had crossed the Tweed. About this time
" a person who was connected with the family, hap-
" pening to be in Holland, found means to learn the
" secrets of the thread manufacture, which was then
" carried on to great extent in that country, particu-
" larly the art of sorting or numbering the threads
" of different sizes, and packing them up for sale,
" and the construction and management of the twist-
" ing and twining machine. This knowledge he com-
" municated on his return to his friends in Bargar-
" ran, and by means of it they were enabled to con-
" duct their manufacture with more regularity and
" to a greater extent. The young women in the
" neighbourhood were taught to spin fine yarn, twin-
" ing mills were erected, correspondences were esta-
" blished, and a profitable business was carried on.
" Bargarran thread became extensively known, and,
" being ascertained by a stamp, bore a good price.
" From the instructions of the family of Bargarran,
" a few families in the neighbourhood engaged in the
" same business and continued it for a number of
" years. It was not to be expected, however, that
" a manufacture of that kind could be confined to so
" small a district, or would be allowed to remain in

"so few hands for a great length of time. The se-
"crets of the business were gradually divulged by
"apprentices and assistants." Traders in Paisley
availed themselves "of these communications, and
"laid the foundation of the well established and
"extensive manufacture of thread, which has ever
"since been carried on in that town."

Such was the commencement of this manufacture. With regard to its progress, it is said that when first introduced at Paisley in 1722, and for some years afterwards, the value of thread manufactured, did not exceed £1000 per annum: but it gradually advanced, so that in the year 1744 there were ninety-three mills[a] for twisting or twining thread. In the year 1781 they increased in the town and suburbs to 132; and in 1791 there were 137, which brought to market threads to the value of £60,000 yearly, and gave employment to many industrious families. In ordinary times there are about the same number of machines for twining thread; but they are of better mechanism, and the business is in every respect so ably conducted, that this manufacture is considerably extended. The quantity of linen yarn made into thread may be about 350,000 spindles yearly; the annual value of the thread itself may be about £100,000; and the number of persons employed about 1500, exclusive of those employed in spinning yarn, which is carried on at a distance from town, or in other parts of the kingdom, or brought from Ireland. The kind of thread chiefly manufactured is

a See Statistical Account, vol. vii. p. 88.

white thread, known to the merchants by the name of ounce or nuns thread, being different from the coloured kinds made at Dundee and Aberdeen. Besides this, there are considerable quantities of heddle twine prepared, not only to serve the weavers in Paisley and Glasgow, but also in Coventry and Spittalfields: and small quantities of thread in imitation of the manufacture of Lisle in French Flanders, are also made at this town. Some of this kind, which has been produced in Paisley, and made of Scots yarn, is worth above ten guineas per pound. The trade is regulated by an act of parliament passed in 1788, which determines the length of the reel and the number of threads in each hank: an important and salutary regulation for the consumer, because it prevents frauds, and enables him to understand with precision the kind and qualities of thread offered for sale: a statute which might, with great propriety, be extended to every species of thread. This act does not extend to Ireland; where considerable manufactures of thread are now carried on under no legislative regulation. In consequence of this, the number of threads in their hanks has been from time to time reduced, so that they begin to supplant the British manufacturer, (who pays a duty of 10 per cent on all threads exported to Ireland) both at home and in the foreign market. This trade is at present (1812) so very greatly declined at Paisley, that there are not ten thread mills fully employed. The restraints on all commercial pursuits, arising from the circumstances of Europe, materially affect this branch of business.

The stagnation is partly owing to the introduction of cotton thread, and partly to the manufacture of ounce thread being much prosecuted in Glasgow and Aberdeen, and in different parts of Ireland: it is hoped, however, it will soon regain its usual importance. Within these few years the manufacture of cotton thread has been carried on to considerable extent. It is called *wire thread;* is prepared by machinery of the most approved construction; the extent is equal to the produce of about thirty mills, fully occupied in making ounce thread; affords employment to about 120 persons, exclusive of the cotton spinners, and it meets with an extensive sale in many parts of the kingdom.

The extent of the linen thread manufacture in all its branches *for the whole of Scotland* in 1784, and its national importance is accurately given in the communication already mentioned,[a] and coincides nearly with the results of the inquiries made by Mr Arbuthnot, secretary to the trustees for the encouragement of arts and manufactures. The author computes that there are employed for twining *ounce* thread 200 machines, and for coloured, and other threads 300 machines: that the quantity of linen yarn used for these manufactures is, 1,080,000 spindles, which, when made into thread, may be valued at £220,000: and that this manufacture, in all the various operations from the spinning of the flax to the finishing of the thread, employs upwards of 20,000 women, besides 4000 or 5000 men.

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a See foot note page 242.

Cotton Spinning.—Soon after Sir Richard Arkwright had invented his mechanism for carding and spinning cotton, the traders in this part of Scotland directed their attention to the cotton manufacture, which has now become, by far, the greatest and most extended branch of business in this county. Accordingly, about thirty years ago, a number of mills, with powerful machinery for spinning cotton, were erected on the various rivers and streams of Renfrewshire. The earliest of these was upon the water of Levern, at Barrhead, in the parish of Neilston, where a small building, 78 feet long and 28 wide, was completed and filled with spinning machinery, in the year 1780. Soon afterwards, a similar mill, on a more extended plan, was erected at Busby on the river White-Cart, in the parish of Mearns; and in the year 1782, a large mill of six stories, 112 feet long and 31 feet wide, was erected at Johnstone, on the river Black-Cart, in the parish of Paisley, which was the first extensive establishment of that nature in Renfrewshire. In less than twenty years a number of mills of the same kind, and of different dimensions, were erected on the banks of all the principal streams of this county; so that, on the Levern, White-Cart, Black-Cart, Calder and Gryfe, there are now nineteen large cotton-mills, and several of less extent, on the smaller streams. Besides these there are in Paisley, Johnstone and Pollockshaws, many large structures for the same manufacture, the machinery of which is driven by powerful steam engines, on Bolton and Watt's construction: so that the whole number of cotton

mills in Renfrewshire, of every size and of every description, exclusive of those which are filling with looms, or are unoccupied, may at present be about forty-one. The introduction of this manufacture, and the capital employed in it, have produced a great addition to the population of the county, and a vast consumpt of cotton from the British colonies, and from North and South America. From careful and accurate calculations it appears, that the cotton mills in Renfrewshire, at present contain 237,000 spindles for spinning yarn known in commerce by the name of *mule-yarn*, and 28,500 spindles for water twist; that they work into cotton yarn at least 8,850,000 lbs of cotton wool annually; give employment to 932 men, 2449 women and 1792 children; and bring to market cotton yarn to the amount of £630,000. The capital employed in this branch of business within this county is probably not less than £300,000, vested in buildings and machinery. The kinds of yarn spun are seldom of the finest quality, the value at present being commonly about 4*s*. per pound. The consumpt of cotton wool at the spinning mills, in this and the neighbouring county of Lanark, is now of such extent, as to have produced a great change on the trade of Clyde; the industry of our manufacturers at home giving a new direction to our foreign traffic.—The following statement of the imports of cotton into Clyde at different periods, illustrate this.

	Bags.	lbs.
In 1775 there were imported,	508 =	137,160
In 1790.....	6,509 =	1,757,504
And the average of six years from 1804 to 1810,.....	31,364 =	8,468,832[a]

The wages of persons employed in cotton spinning are;

	s.		s.	
Men from.....	16	to	24	per week.
Women from...	6	to	8	
Children from	3	to	5	

The time of attendance, is from six o'clock in the morning, till 7 or 8 in the evening; and, after deducting the intervals allowed for breakfast and dinner, the hours of actual labour are eleven.

In order to show the rapid increase and prodigious amount of the cotton manufactures of this island, Dr Aitken in his history of Manchester, has given some extracts from a pamphlet published in 1788, the purpose of which was to warn the nation of the bad consequences which would result from the rivalry of the East India cotton goods, which then began to be poured into the markets in increased quantities, and at diminished prices. The author of that pamphlet asserts, that, not above twenty years before the time of his writing, the whole cotton trade of Great Bri-

a Mr Chalmers states that the cotton wool imported into Scotland during 1755 was 105,831 lbs, and in 1800 = 13,204,225 lbs. See Caledonia, vol. ii. p. 42.

tain did not return £200,000 a-year to the country for the raw materials, combined with the labour of the people: but at the time he wrote, although there were only 114 water mills in England and nineteen in Scotland, yet the gross return from the raw materials and labour exceeded seven millions sterling. He estimates that those establishments, when in full work, give employment to 110,000 persons; that in all the subsequent stages of the manufacture, the number employed is estimated at 240,000; making an aggregate of 350,000 persons: and the quantity of raw material applied to the different branches of the manufacture he computes at 22,600,000 lbs. But since the year 1788, the cotton manufacture has increased in, at least, a three or four fold ratio; the quantity of cotton manufactured being probably 80,000,000 lbs, the number of persons employed in all the branches, about one million, and the gross value of the goods made above £20,000,000.

It has been alleged by persons well qualified to judge,[a] that the business of cotton spinning, as carried on in large mills, is prejudicial to health; arguing, that the crowds of persons assembled, the effluvia of oils employed in the machinery, the particles of dust and cotton inhaled into the lungs, and the long confinement in the work rooms, are predisposing causes to debility and disease. It must be admitted, that the apartments of many of the cotton mills which were first erected, were small and not well ventilated; and it must also be admit-

a See particularly Dr Aitken's Hist. of Manchester, p. 219.

ted, that, in order to supply the demand for cotton yarn, in the early stage of the business, the machinery was, in many instances, kept going night and day, attended by a constant succession of work people; that of these there was generally a very considerable proportion of children of perhaps seven or eight years old, whose healths, at that tender age, could not but be very materially injured. But the system of working during the night has been given up for a considerable time; some of the first erected mills of small dimensions have been abandoned; new buildings with lofty ceilings and well ventilated apartments, have been constructed; and a much greater attention is given to cleanliness than formerly; so that the evil is in a very great degree remedied. That those large establishments may have a very unhappy effect upon the morals of the young persons employed in them, is greatly to be dreaded: that they preclude them from the ordinary means of education, is obvious: whether these most serious evils, the effects of which are perhaps already appearing, are guarded against as generally and as effectually as they ought to be, is greatly to be doubted.

The mode of heating the apartments of cotton mills and other large works, by metal tubes from a furnace, is in many instances laid aside, and steam pipes adopted, as a surer precaution against accidents from fire. The mode of lighting mills was generally with candles; but of late, oil has been used in several instances, in lamps somewhat similar to Argand's, with reflectors attached to them, which has been found more œconomical than candles. The

obtaining of light for work rooms by the combustion of gas from coal,[a] has been adopted with success, at one mill in Renfrewshire, as shall be afterwards noticed. It's being free from the danger resulting from the sparks and frequent snuffing of candles, is a circumstance of importance, as tending to diminish the hazard of fire, to which cotton mills are exposed. Accidents by fire have occurred, within the last twelve years, at four of the largest cotton mills in this county, which were totally consumed.

Muslin Manufacture.—About the year 1785, after coton spinning was fairly introduced, muslin goods engaged the attention of the manufacturers of this district. The ingenuity and good taste of the traders and workmen in Paisley, had led them, as already noticed, to introduce many beautiful varieties in the patterns of lawns and silk gauzes; but the use of muslin being introduced, and daily gaining ground among all ranks, the elegant lawns and silk gauzes of Paisley being no longer in demand, the manufacture of these was gradually dropt. It was necessary that new and varied fabrics should be brought forward to meet the change of fashion. The skill of the weavers in Paisley, was consequently directed to this object, and productions from their looms were soon exhibited, which surpassed the muslins of any other part of the kingdom. Their

a An Account of the application of gas from coal for economical purposes, is given by Mr Murdoch in the Phil. Transactions for 1808, and copied into the Monthly Magazine, vol. xxvi. page 546.

early habits enabled them easily to invent varieties of patterns of fancy muslins, and they found it equally easy to alter and improve them. The transition from ornamental thin gauzes to cotton goods of a light and elegant texture, was to them so simple and natural, that in no other manufacturing town were fine muslins and richly finished articles of dress produced in the same perfection. Their ingenuity as workmen is still unrivalled, and their superiority is generally acknowledged: and what was said of Bolton in Lancashire,[a] in the year 1793, may be at present strictly applied to Paisley: "It is the centre of the "manufacture of ornamental or fancy goods, and "it is only by emigrants from this place, that any "branches of this trade have been transplanted else-"where. The most ingenious part of the workman-"ship remains rooted as it were to the soil, and flour-"ishes even amid present discouragements." The condition of the manufactures of Glasgow confirms this: for although the muslin manufacturers in that city, which is only seven miles distant, carry on this business to an immense extent, yet in articles of fancy work they have always been surpassed in Paisley. In fact the superiority of the Paisley weavers in these ornamented fabrics, is so fully admitted, that Paisley is resorted to as the original seat of this branch of the muslin manufacture; and many weavers in this place are employed for these articles by Glasgow manufacturers. The most dextrous workers em-

a Aitken's Hist. of Manchester, p. 262. The neighbourhood of Bolton was the birth place of Sir Richard Arkwright.

ployed in Glasgow on these kinds of goods are either natives of Paisley, or persons who have learned their business there.

Tambouring and fine needle work is also carried to greater perfection here, perhaps, than in any other quarter, and employs a great number of young women.

The number of looms for manufacturing muslins of every description, in Paisley and the suburbs, may be about 5000, and in the whole county, about 7000. The improvements that have been made upon the mechanism of the loom of late years, and, in every instance, by mere operatives, are very great; and the ingenuity with which the weaver adapts his loom to different fabrics and varied patterns, is truly admirable.

Besides those looms which are wrought in the usual manner, each of them by an individual workman, looms have for some years been introduced, which are moved by a steam engine, or other powerful machinery. Of these perhaps from 100 to 120 may be included in one building, and put in motion by the same power. Buildings for this purpose have been erected at Paisley; at Pollockshaws, and Thornlybank, in the parish of Eastwood; at Busby in the parish of Mearns; at Fereneeze, in the parish of Neilston; at Johnstone, in the parish of Paisley; and at Houston. They are employed for manufacturing coarse cottons for callico printing, and for sheeting; and may weave about 2,700,000 yards annually, the value of which may be about £125,000. The

number of looms on this construction may at present extend to 500: the persons employed 560.

In the infancy of mechanical arts, before the loom and the fabrics obtained from it were brought to their present state of improvement, the manufacturer must have been subject to many difficulties and inconveniences: but by throwing into separate professions the different operations connected with his business, and thus dividing and subdividing the labour, his progress has been accelerated: what was formerly difficult, expensive and tedious, though still complicated, is performed with ease, economy and dispatch: he now gives employment, not only to the makers of looms, reeds, shuttles, *heddles*,[a] wheels, and other implements; but also to the spinner, winder, warper, starcher, beamer, *drawer*,[b] and weaver, which are distinct occupations: so that before a web of fancy goods is completed, it goes through the hands of persons of those different professions: for although weaving is the business of one man, the previous operation of mounting the web, or arranging the furniture of the loom, is very frequently the work of many. The web, in many instances, when taken from the loom, is conveyed to other hands to be enriched and improved, either by sewing, or

a *Heddles*, that part of the apparatus of a loom necessary for raising and separating the threads of the warp so as to admit the shuttle. They are frequently prepared by females, and are made of very strong thread, called *heddle-twine*.

b The operation of passing all the threads of the web through the heddles and through the splits of the reed is called *drawing;* and in a complicated web the weaver has recourse to persons who devote their attention to this division of the art.

by tambouring, or by clipping, or by opening: it is then finished by bleaching, and carried to the warehouse as an article for sale.

The *income* of the labouring class of manufacturers is variable; and there are not the same data for making a computation on this head, as in the case of labourers, carpenters, and masons, a correct statement of whose wages has already been given.[a] Persons employed as weavers work by the piece, and the rate of price rises or falls according to the state of trade, or the greater or less demand for goods. In unprosperous times, many of them are either thrown idle, or restricted to a certain quantity of work, in a given time, judiciously distributed among them by their employers. When business flourishes, and a quick demand arises for manufactures, the weaver obtains higher prices for his work, is no longer restrained from pursuing his labours to any extent, may exercise his skill and invention in contriving new patterns, and in such new work he has his share of advantage from the employers, who cheerfully give a high rate for his labour. It is said, that a *superior tradesman, in very good times*, and in the circumstances now alluded to, can gain three guineas per week;[b] but this is not stated as evidence of the rate of wages. The weaver is often laid idle for want of employment: there is always a loss of time when he is preparing his web, or putting it into the loom; and, when those deductions are taken

a See page 158.

b See Scots Magazine for 1806, page 577.

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is from Ireland: it is not to be supposed that the most respectable part of society leave their homes; and this intermixture of strangers is perhaps producing too great a relaxation in the serious habits and severe manners which once characterised the weavers of Paisley.

The establishment of a Popish chapel here is a wonderful phænomenon. No place was more zealous in opposition to the Popish bill in 1779 than Paisley. It was not without danger that a person durst venture to express himself even with indifference upon the subject. Within these three years a large building has been founded, erected and opened for the Romish worship, almost without being noticed or becoming a subject of conversation. At the period above alluded to, not a papist was known in Paisley; now, considerable multitudes are seen regularly resorting to the chapel for worship.

Distinct accounts have been preserved of the *number of looms*, at different periods, in Paisley and the towns and villages in Renfrewshire. Some of these accounts are official returns in consequence of parliamentary inquiries, and, in general, they may be considered very correct. They exhibit a view of the rise and progress of the lawn, the silk, and the cotton manufactures, and are as follow:

		Looms.
In 1744,	Before the business had extended to the country, and when it was confined to Paisley, there were employed in linen or lawns,.....	867

		Looms.	
In 1766	The silk looms were	702	
	Lawn or linen,	855	
	Thick goods,	45	
	Empty	165	
			1767
In 1773	Silk looms,	876	
	Ribbon,	155	
	Linen or lawn,	557	
	Thick goods,	66	
	Empty,	579	
			2233

But at this period, or soon after, numbers of looms were employed in the country: of course the extent of the manufactures of Paisley can only be judged of by taking these into view; and they may be stated thus:

	1776	1781
Silk looms ...	2500	4800
Linen or lawn	1500	2000
Total	4000	6800

In 1791-2, when the silk manufacture had declined, and the muslin become prevalent, there were fewer looms employed in the towns and villages of neighbouring counties.

Within Renfrewshire alone[a] there were;

	Looms.
In Paisley and the suburbs,	3602
In the parish of Eastwood,	470
In the parish of Kilbarchan,	417
In the parish of Lochwinnoch,	135
In the parish of Neilston	152
And in the other parishes of this county,	256
Total	5032
In 1805,[b] the numbers were	6870

And at present, when the looms moved by steam engines and water wheels are taken into account, the numbers are about 7500.

Tape manufacture.—"Glasgow was the first place "in Britain where the Incle loom was established; "Mr Alexander Harvie having, in the year 1732, "at a very great risk of his life, brought over one "of the workmen and a model of a loom from "Haerlem."[c] This branch, however, was not introduced at Paisley till 1788, when a company began the manufacture of tapes with thirteen looms, which in a few years were increased to forty-one, and lately

a See Statistical Account, vol. ii vii. xv and xvii.
b See Scots Magazine for July 1806.
c Statistical Account, vol. v. p. 503.

to sixty, affording employment to ninety persons. The tapes of this place are manufactured from a mixture of cotton yarn, which is spun at home, and of linen yarn imported from Ireland.

Soap-making.—This art, which was known at Dundee so far back as the sixteenth century, has been carried on at Paisley to considerable extent since the year 1764, which is said to have been the date of its commencement. The manufacture of soft soap was begun in 1776; and in 1781 there were five companies engaged in soap-making, who brought to market hard and soft soap to the value of £30,000 per annum. In the year 1791 there was the same number of houses in this business, one of them with works established at the royal burgh of Renfrew, but the manufacture was carried on to far greater extent than formerly. The duties paid to government by two of them were £7500, and, as the sum paid by the other three must have been of still greater amount, it is probable that the whole excise duties from these works might be about £16,000 per annum: but this manufacture has been declining for some years. The same soap-work is still carried on at Renfrew, and there are three works at Paisley, but the duties payable by all of them united do not exceed £13,000 per annum: so that this trade has declined considerably in this as well as in other places. The manufacture of candles, of excellent quality, was formerly carried on at Paisley to considerable extent; and, though the business is still prosecuted, it has also declined. The substituting of oil in place of candles in cotton mills and work shops, and sometimes in private families,

is supposed to be partly the cause. The houses engaged in this business are four in Paisley and one at Kilbarchan: the amount of their excise duties may be computed at £1100 per annum.

There are four *Tan-works* at Paisley, one of which was established about forty years ago, and is extensive. There is also a tan-work on the water of Gryfe at the Bridge of Weir. The value of leather tanned annually at those works is computed at £45,000; the duties paid to government amount to £2700 per annum: the quantity of oak bark annually consumed may be near 800 tons, in value about £13,000. The number of workmen employed, is sixty.

Distilleries have been carried on in the town and neighbourhood of Paisley, with great success, for more than twenty years, but they are now of less extent than formerly; some of the companies engaged in this business having removed their works to the banks of the Forth and Clyde Canal in the neighbourhood of Glasgow. The spirituous liquor prepared from malt is in great perfection; and the spirit produced from sugar, which is used during the suspension of the distillation from grain, though when first introduced not much esteemed, is now in very general request. The duties arising from the distilleries form a leading article in the revenues of excise collected at this town, as appears from the following,

Table of excise duties charged for that division of Renfrewshire, which comprehends Paisley, Renfrew, Neilston, and Johnstone.

	£.	s.	d.
For the year from 6th July 1807 to 5th July 1808, (grain distilling this year).....	103,854	18	2½
For the year from 6th July 1808 to 5th July 1809, (no distilling this year, or sugar distilling only)	43,963	5	6½
For the year from 6th July 1809 to 5th July 1810,.....	79,072	11	8
For the year from 6th July 1810 to 5th July 1811,.....	63,288	4	3¾
Average of these four years,	72,544	14	11

The articles from which this revenue arises are leather, soap, and candles, as already stated; also bricks and tyles; and duties from auctions, licenses, &c. About £2500 of it arises from a large brewery at Paisley, and about £1200 of it from two small ones at the village of Johnstone, and at Thornly-park on the south of Paisley; all of which will probably be still more extended in consequence of almost all families having given up their ancient practice of private brewing, a branch of domestic economy which was long retained in Paisley. The duties on distilling form by far the greatest article in the above table: those on callico printing shall be afterwards noticed.

There are two *Founderies* at Paisley for preparing goods of cast iron; and two works for making all sorts of nails. These four establishments give employment to about fifty men. Various utensils of cast iron for domestic purposes are made at those works; and the numerous articles of that material used in the cotton mills in the neighbourhood have given considerable employment to the founderies. The coak consumed is brought partly from Howbank in this county, but the chief supply is from Carntyne coal work on the east of Glasgow. The making of the machinery for cotton spinning is become a considerable branch of business, and has led to the very general application of the steam engine to the driving of the turning looms employed in forming the metal and wooden wheels, spindles, &c. used in the cotton mills.

The steam engine has also been applied in Paisley for driving two flour mills, one of which has existed for some years; the other is recently erected on the bank of the Glasgow and Paisley canal.

The manufacture of thread, of lawns and of muslins, has long given employment to a great number of *bleachers* diffused over the surrounding country. Before the year 1768, all bleaching operations were carried on at fields upon the banks of the river Cart, immediately adjoining the town of Paisley, and on the little rivulet Espadair on its east boundary. But, after this period, numbers of bleachers obtained more extensive bleaching grounds at one or two miles from the town; and in a few years there were esta-

blished, at distant situations, in neighbouring parishes, numerous bleaching works, the owners of which derive employment both from Glasgow and Paisley. There are at present fifty-six bleachfields in Renfrewshire; and the occupiers almost universally follow the newest and shortest process, by preparing bleaching liquor, or using bleaching powder; thus forming, as a liquid for their purpose, oxy-muriate of lime. Their art has derived much benefit from chemical discoveries, and they have wisely availed themselves of the aids which science affords. Their process is carried on within doors; and the whole operation is often finished without having recourse at all to the field; so that bleaching grounds are now not much wanted, and consequently portions of them have been thrown into cultivation. The number of women employed by the bleachers, though less than formerly, is still considerable; and their wages are commonly from 6*s.* to 7*s.* 6*d.* per week.

About thirty years ago there were several extensive *Timber yards* established at Paisley, and a very considerable importation of goods from the Baltic. Some of the merchants were owners of vessels: these unloaded at Borrowstownness, the cargo being transported from thence by the Forth and Clyde canal to Glasgow, and forward by land carriage to Paisley: there were likewise large rafts of timber frequently brought up the White-Cart from Greenock This trade was carried to considerable extent at the time

the Statistical account was published:[a] "the many "and large buildings then erecting for cotton spin- "ning produced a great demand for wood and iron; "the bleaching and soap-making for tallow and ash- "es:" but it is now little prosecuted.

It may be here observed, that the wealth and population of this town have kept pace with its progress in manufacture. Many circumstances indicate its gradual advances. The dates of the commencement of new streets, and of the erection of many public and private buildings are preserved,[b] and the detail of them might illustrate this: the revenues from the post office mark it as a town rising in importance. These, as given by the post-master, whose father and grand-father held the office, were;

	£.	s.	d.
In 1726,	28	13	0
1769,	223	3	8
1809,	2814	17	7

a Statistical Account, vol. vii. p. 90.
b Semple's continuation of Crawford's History.

But the circumstance, perhaps, which most distinguishes Paisley, is an increase of population in a greater ratio than in any town in Scotland.

Years.			Males.	Females.	Souls.
1695, the numbers were.....					2,200
1753-5.....					4,290
1781, town and suburbs, 3723 families equal to about					16,700
1791	do.	do.	9,548	10,355	19,903
1801	do.	do.	11,228	13,096	24,324
1811	do.	do.	13,143	16,398	29,541

These are merely the inhabitants of *Paisley* and of the *suburbs* closely attached to it, which, from contiguity, form *one town*. In the statements of the population of most towns, the numbers have been greatly magnified by including, as population of the towns, that of, often, a very extensive country parish within which the town stands. Many thousands are thus added to the real number of inhabitants in Edinburgh and Glasgow. The population of the whole kingdom is obtained by the public surveys, but the comparative population of different towns cannot be accurately judged of, the country districts being very different in different cases.

Johnstone, a village in the parish of Paisley, has been built since the commencement of cotton spinning in 1782. Fourteen of the cotton mills, already mentioned, are situated at this place, containing

83,885 spindles, and employing 1511 persons; and its progress has been;

Years.			Souls
1782, two families,....			10
1791,			1434
	Males.	Females.	
1801	972	1332	2304
1811	1334	2313	3647

Neilston, a parish adjoining Paisley, contains numbers of bleachfields and many looms, deriving employment from manufacturers in Paisley; and upon the Levern, in two or three miles of its course through that parish, there are six of these large cotton mills formerly mentioned; containing 57,000 spindles, and affording constant work to 1290 persons. The village is now become a post town, where there are arrivals on Tuesdays, Thursdays and Saturdays, and a revenue of £80 a year from the post office. The effect has been a great increase of population in this parish, the progress being;

Years.			Souls.
1695, 263 families or about			1180
1753-5, ...			1274
	Males.	Females.	
1791 . . .	1187	1143	2330
1801 . . .	1702	2094	3796
1811 . . .	2205	2744	4949

This is not the proper place to enter on the subject of the population of this county, tables of which are afterwards given; but the above communications are here made to shew the state of population in Paisley and in parts of the country immediately connected with that town, and influenced by its manufactures.

The revenues of the town of Paisley do not exceed £2500 per annum. They arise from the rents of pews in the churches, destined chiefly for paying the stipends of the ministers; from road-money, for paving, making and repairing streets, roads and lanes; —and from *entry-money* or *fines* exigible after the sale or alienation of property. The magistrates, as superiors of the lands and tenements within the burgh, are entitled to a year's rent, as a composition, or fine, when property is alienated: but they have derived little revenue from this source; for till very lately they exacted only one-eight of the free rent. The state of the burgh now requiring an augmentation of revenue, they have lately increased the entry, or fine, to one-fourth of the rent from every new purchaser, from the date of the last charter; making allowance of one-fifth for repairs of the property. The other sources of revenue are the tonnage duties from the river Cart; and small dues exacted from persons bringing provisions into the town. Assessments on the inhabitants, for lighting, watching and cleaning the streets, are managed, by commissioners appointed by the inhabitants, in terms of a late act of parliament.

Paisley being situated in the centre of a cultivated part of the country, and surrounded by a *considera-*

ble extent of lands susceptible of the best cultivation, the prices of property do not advance to the same high rates as at Greenock, where the quantity of land which admits of good cultivation is very limited. The high value of property at the latter is already stated. At the former, lands are sold in small lots of two or three acres, at from £160 to £210 per acre; gardens let at from £8 to £12; and the best farms at from £4 to £6 per acre.

The eastern part of Renfrewshire is the seat of several important manufactures, some of them peculiar to that district, and established by merchants and manufacturers in Glasgow. Being more connected with that city than with Paisley, it has been thought proper to mention them distinctly here.

The cotton spinning, and the looms moved by a water wheel at Thornly-bank, and by a steam engine at Pollockshaws, have been already mentioned. But it may be here farther observed as to the latter; that all the buildings for cotton spinning and for weaving, at that extensive establishment, are lighted by the combustion of *coal-gas;*—that 420 lights, each of them of as great a degree of intenseness as three of the candles commonly used at the mills, are disposed through the different large apartments, affording a brilliant and pleasing light to the numerous workers in that large factory;—that though sometimes an offensive smell arises from the escape of unconsumed gas; this defect may certainly be remedied;—and, that the beneficial effects of security against fire, as already noticed, are fully experienced. It may be also remarked as a peculiarity in

the large manufactories in the parish of Eastwood, that in the looms which are moved by the water wheel and the steam engine, the machinery is also applied to give motion to an apparatus for dressing the web: an improvement which will no doubt be soon adopted at the other similar works at Paisley, Fereneeze and Johnstone. It has been justly observed, by a gentleman who is an owner of establishments of this kind in this county, that, " this infant branch of the " cotton manufacture promises very important ad- " vantages to the kingdom in general, and to this " part of the country in particular:—to the king- " dom in general, because it will, in a considerable " degree, enable us to compete with several countries " on the continent of Europe, where the rate of la- " bour is extremely low, and where considerable pro- " gress has been made in the manufacture of coarse " cottons, for which those looms are peculiarly a- " dapted:—and to this part of the country; because " it does not interfere with the manufacture of the " fine fabrics of this district, and therefore, instead " of diminishing, encreases the productive labour of " its inhabitants.—It may supply the callico printers " of Scotland with those cloths which they have hi- " therto chiefly got from England, and even from " the India house."

Callico-printing.—One of the earliest works in Scotland for printing linens and cottons was established at the village of Pollockshaws, but it has for some time been abandoned. About the year 1770 the same business commenced at Corsemill, or Levern.

printfield, in the parish of Paisley; and in 1773 a similar work was begun at Fereneeze, in the parish of Neilston. Some time afterwards, works of the same kind were established at Thornly-bank, in the parish of Eastwood; and these are at present carried on to very great extent:—a few years ago a small establishment for this branch was formed at Locherwater, in the parish of Kilbarchan. The works at Kilbarchan, Fereneeze and Corsemill employ 230 persons, pay £7500 of yearly wages, and contribute £11,000[a] to the revenue of excise in the Paisley district, as already mentioned. The goods printed at all these works are shawls and handkerchiefs: at Kilbarchan and Fereneeze for the home and foreign market, at Corsemill only for the former. Both copperplate and block-printing are carried on at all those works, and ably conducted. At Thornly-bank, not only are great varieties of printed goods of those descriptions produced, but also fine chintz pieces, for gowns and furniture, chiefly for exportation. The admirable improvements which have been made on the copperplate printing presses, are fully adopted here, and constantly prosecuted: and the practice is still pursued of singeing the cotton goods, by passing them over an iron-cylinder at a red heat, before printing them. The duties of excise at this work, paid to the Glasgow division, on an average of the two last years, is £10,089 13*s.* 10*d.*; the

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	£.	s.
a The excise duty at Corsemill was for 1810,	7122	17
for 1811,	4387	3
Average, £5755.		

number of persons employed are 313, and the yearly wages £8000 The rates of wages of servants at the printfields weekly, are;

	s.	d.		s.	d.
Engravers and Printers from	20	0	to	25	0
Labourers from.....	10	0	to	12	0
Women from.....	5	6	to	8	6
Children from.....	2	6	to	3	6

Paper manufacture.—The county of Edinburgh is the chief seat of the manufacture of paper, which has *there* been carried to greater extent than in any other part of Scotland. It has been but slightly attended to in the county of Renfrew, although it was very early introduced into the east part of the county, as appears from the Statistical Account of Cathcart published in 1793. "One Nicholas Deshan, a "paper maker, who, we are told, was driven from "France, his native country, in consequence of the "revocation of the edict of Nantz, took refuge and "established his business, in the parish of Cathcart, "about the end of the seventeenth century. Having "connected himself with an opulent family there, "they conjunctly erected very large buildings for "carrying on the paper manufacture. His descend-"ants continued to make paper till very lately; but "not finding it a profitable business, the present pro-"prietor of these buildings, has converted them in-"to a snuff manufacture, which yields him a more "certain and permanent profit." A paper work is still carried on at Williamwood, on the banks of the

White-Cart, at a short distance from Mr Deshan's original establishment: from this work, the duties to government, on an average of two years, paid to the excise at Glasgow, are £1691 12*s.* 5*d.*

There is one *brewery* at Pollockshaws, and two *skinners' works* for dressing, preparing, and finishing sheep and lamb skins; they are of no great extent, as appears from the small amount of the duties stated in the following table.

The total amount of excise collected in the two parishes of Eastwood and Cathcart, for two years, commencing the 5th of July 1809, stands thus;

	103d year. 1809—1810			104th year. 1810—1811		
	£.	*s.*	*d.*	£.	*s.*	*d.*
Malt, ale and beer,	99	16	6	90	19	1½
Leather,.....	101	8	7¾	99	0	7¾
Paper,.....	1,567	18	1½	1,815	6	9
Printed goods,.....	10,810	19	9½	9,368	7	10
	12,580	3	0¾	11,372	14	4¼

Average £11,976 18*s.* 8½*d.*

Alum manufacture.—From Professor Beckman's History of Inventions and Discoveries, it appears, that, previous to the middle of the fifteenth century, Europe was furnished with alum from Turkey, and

in particular from Constantinople, and Smyrna. The manufacture, according to that author, was introduced into the Pope's dominions, in 1458, where it is still continued at Tolfa, near Civita Vecchia. It was next established in Spain, at works near Carthagena;—in Germany, about the middle of the sixteenth century;—at Andrarum in Sweden, in 1630;—and in England, in the reign of Queen Elizabeth. For the introduction of this manufacture, England is indebted to Sir Thomas Chaloner of Gisborough in Yorkshire, who, observing "the trees "tinged with an unusual colour," [a] naturally suspected that this was owing to some mineral in the neighbourhood, which, being searched for, and discovered, proved to be aluminous. It was near the end of the sixteenth century, that he established his works, about twenty miles from Whitby, for the manufacture of alum. These were succeeded by others in 1615, near that town, and in a short period, there were in that district, no fewer than sixteen works for the manufacture of that salt. But this trade, in England, is now engrossed by five companies, who manufacture about 3000 tons per annum, and is confined to the district round Whitby. It had been attempted, at different times, in other parts of the kingdom; particularly a few years ago at Neath, in Glamorganshire; and at early periods at Preston and Blackburn in Lancashire, at which latter place Sir George Colebrook, in 1772, when he formed his plan for monopolizing alum, opened and wrought mines,

a See Cambden and Pennant.

for this manufacture: but all these are now abandoned. The establishment of alum works in Scotland, in 1797, has been already mentioned; and a short account given of the mines which afford the aluminous schistus for the alum works at Hurlet.[a] It may not be improper to subjoin some account of the process of alum making.

The ancient Grecian and Italian process, which is probably still very general, consisted simply in collecting the aluminous mineral, (already calcined by the great volcanic processes which take place in those countries,) in lixiviating, and in boiling the lixivium to the requisite degree of concentration. Alum appears to have been procured very abundantly, by this simple method; for the important fact due to the modern researches of chemical science, of the necessity of an alkali, and of pot-ash in particular, to the formation of this salt, seems to have escaped observation; in consequence of amonia, or an alkaline substance, being in fact combined with the aluminous materials.

Accurate accounts of the Whitby process have been published by Mr Colwall in the Philosophical Transactions for 1666,[b] and by Mr Winter in Nicholson's Journal for 1810. With the exception of the use of greater variety of salts with pot-ash base, no important change has occurred in this long interval, and the two accounts may be said to agree. The formation of the Whitby sulphat of alumine, is

a See page 26.
b Vol. xii. p. 1052.

effected by the usual and ancient mode of calcination; but it is probable that the Scottish process presents an anomaly: for at Hurlet and Campsie the aluminous schistus rests on a *pyritous-coal*,[a] which has been excavating for a long series of years, from mines which are extremely dry, and of which the temperature is seldom under 63° of Fahrenheit, and in places excluded from the current of air of the shafts, the temperature is above 70°. The sulphur of the ore may be conceived to be acidified, (by the contact of atmospheric air aided by the gentle ventilation and heat,) and to combine with its various other constituents; of consequence the most abundant products are the sulphats of iron and alumine, but those of magnesia and lime, are also not unfrequent:[b] and thus the result of rapid calcination is attained more slowly and abundantly in the lapse of years. The mixed salts of iron and alumine thus formed, are conveyed from the mines to the works, then lixiviated, and the black insoluble residue is

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a This particular variety of coal is of the caking, or cementing quality, like that of Newcastle and Whitehaven; abounding, like them, in layers and nodules of pyrites. There are four points in this particular district of Scotland, Hurlet and Houston in Renfrewshire; Campsie in Stirlingshire; and Kilpatrick in Dumbartonshire; where similar strata indicate the identity of this coal, of which the section p. 20 may be considered a representation.

b It may be interesting to the scientific reader to learn, that in addition to the numerous productions of the mines at Hurlet, the sulphats of soda and barytes, [redacted] have recently occurred. [redacted].

The vitriolic efflorescence mentioned in the account already given of the minerals at Hurlet, page 27, may be termed a compound saline mass consisting chiefly of sulphate of iron and alumine.

thrown aside to *the hill*, as that immense mass is technically termed, which has been thus formed in the fifteen years, since the manufacture was begun. This *hill*, or mass of refuse, continues to undergo farther decomposition, still affording a product of some value.

The lixivium being next concentrated to the proper specific gravity, *either* copperas is first crystalized, and afterwards alum by the addition of pot-ash salts to what are termed the *mother liquors; or*, at once the mixed salts of alum and copperas, by a similar addition of pot-ash materials, are deposited by cooling, and the latter is separated by continued solution and crystalization. The final solution of alum for *roaching*, is brought to a high specific gravity, and to a high degree of heat; afterwards it is run into large vats where it continues to cool for fourteen days, and is then marketable alum.

The number of men employed, in mining the alum-ore, carting materials, attending furnaces, and in the various manufacturing process, is at present forty-seven, and their wages from 2*s.* to 3*s.* 6*d.* per day: 3000 tons of coals are consumed annually, and six horses are constantly employed. The works afford a ready market for above 300 tons of the pot-ash-residuum of other chemical works, such as the sulphat of pot-ash, muriate of pot-ash, soapers'-salts, &c. all of which are used in this manufacture. At the commencement of these works the price of alum in Glasgow was £28 per ton, but it immediately fell to £21, and has varied from that rate to £25 per ton.

Copperas, is occasionally prepared at Hurlet alum work. The oldest establishment in this part of the kingdom for the manufacture of that salt, was at that place: it was begun in 1753, by a company from Liverpool; and, till 1807, when a similar manufacture commenced on the adjoining lands of Househill, was the only copperas work in Scotland. The pyrites from which the copperas is obtained, are collected, for this manufacture, from the neighbouring coal works, as already mentioned:[a] they are exposed to the weather on beds contiguous to the works; and, after gradual decomposition and washing with rain water, afford liquor, which, upon being concentrated by boiling, with a small addition of iron, produces green copperas, or sulphat of iron. The process, as carried on at Deptford in 1666, is given by Mr Colwall in the Philosophical Transactions for that year, and the same process is still employed with few alterations. The price at Hurlet varied about ten years ago from £7 to £9 per ton; in the year 1805-6, it rose to £10 or £11, and since that period it has fallen to £5 per ton. The number of men employed at the two copperas works at this place is seven, exclusive of persons who collect the ore, and cart materials to and from the works. The quantity of coals consumed is about 750 tons, and the quantity of copperas manufactured about 400 tons, yearly.

This account of the commerce and manufactures of Renfrewshire, may with propriety be concluded by a statement of the revenue arising from the pro-

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a See pages 25 and 26.

perty tax and from assessed taxes, as tending to give a view of the landed and commercial interests of this county. The former, as assessed for the twelve months ending 5th April 1810, amounted to £38,445 13*s.* 1*d.*; but, as there were several deductions for overcharges and duties, allowed in terms of the act, the real sum accruing to the revenue was £33,381 4*s.* 9*d.* The assessed taxes and game duty for this county, for the year ending Whitsunday 1810, were as follow;

	£.	s.	d.
Assessed taxes,	15,399	18	1
Game duty,.....	283	10	0
Gross amount,	15,683	8	1
Deduct allowances for children,	340	9	4
Neat amount,	15,342	18	9

It is impossible to give an accurate statement of the various sources of income from which the property tax arises, or to distinguish the proportions which arise from land and from commercial and manufacturing pursuits. The following may be assumed as a sketch of the subdivision of the foregoing gross sum:

Property tax from,	£.	s.	d.
Landed proprietors may be.....	12,000	0	0
Owners of tenements, chiefly in towns,	10,000	0	0
Occupiers of lands,.....	2,190	0	0
Merchants and manufacturers,.....	8,730	0	0
Public offices or employments.....	190	0	0
The Royal burgh of Renfrew,.....	271	4	9
	38,381	4	9

The assessed taxes consisted of the tax on

	£.	s.	d.
Windows,.....	7,162	19	0
Houses,.....	3,386	7	1
354 male servants, and 185 clerks, &c.	978	18	0
35 private four wheeled carriages,...	400	7	0
16 do. post chaises and stage coaches,	151	4	0
45 two wheeled carriages,.....	265	10	0
2 taxed carts,.....	2	13	0
300 carriage and saddle horses,.....	1,073	16	0
1934 husbandry or draught horses,	1,343	1	0
859 dogs.....	342	16	6
Armorial bearings,.....	78	12	0
Hair powder,.....	78	14	6
12 horse dealers.....	185	0	0
And the game duty,.....	283	10	0
	15,683	8	1
Deduction for children,	340	9	4
	15,342	18	9

Effects of Commerce, &c.—Some of the effects of the extensive commerce and manufactures of this county have been already noticed; but it would be improper to dismiss this subject without examining its different bearings, and the advantages and disadvantages which have arisen, or may arise, from trade of such magnitude and so much varied, as that which has been here detailed.

The effects on the maritime and financial interests of the nation are obvious. The number of registered

vessels[a] belonging to Port-Glasgow and Greenock is 538, the tonnage 67,859, and number of seamen 4983: seamen who are accustomed to voyages to remote countries and on dangerous shores. Those sea-ports must therefore be allowed to hold a very considerable rank among the maritime towns which nurse that hardy race of men who maintain our national naval superiority. The effect on the finances is no less obvious. From the great increase of population there is a consequent augmentation of the public revenue: of this the direct taxes in this county, compared with those in counties of much greater extent where commerce and manufactures do not exist, affords a complete illustration.[b] The revenues from excise and customs, when brought into one view, shew the national importance of the commerce and manufactures of this small district;

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a The number of registered vessels belonging to Port-Glasgow and Greenock separately, for the year ending 5th Jan. 1812, was;

	Ships.	Tons.	Men.
Port-Glasgow,	160	21,307	1628
Greenock,.....	378	46,552	3355
	538	67,859	4983

b Thus we may compare Renfrewshire, a manufacturing county, with Berwickshire, a well cultivated agricultural county.

	Acres.	Population.	Land rent.	Property taxes.			Assessed taxes.		
			£.	£.	s.	d.	£.	s.	d.
Renfrewshire,	154,182	91,624	126,000	33,381	4	9	15,342	18	9
Berwickshire,	304,640	30,779	226,000	33,000	0	0	9,496	4	10

So that although the area, land rent, and valued rent of the latter are nearly double those of the former, yet the direct taxes in Renfrewshire far exceed those of Berwickshire.

and, though they are not derived exclusively from the inhabitants of this county, yet, as they are collected within its bounds, they may with propriety be added to the more direct taxes, so as to exhibit in one sum the amount raised in the county of Renfrew, for the public service.

The revenues[a] *from*	£.	s.	d.
Customs,[b].....	796,462	9	5
Excise,.....	306,376	11	0
Post office,.....	9,580	13	3
Property tax,...	33,381	4	9
Assessed taxes,.....	15,342	18	9
Land tax,[c].....	742	2	5
Militia assessment,[d].....	415	0	8
	1,162,301	0	3

a See pages 212, 213, 220, 221, 238, 265, 268, 270, 276, & 283.

b The duties from *cotton-wool alone*, imported direct to Greenock and Port-Glasgow, communicated, in the most obliging manner, by the collector of the customs, for the two last years, ending 5th Jan. 1812, were;

		lbs.	Duties. £.	s.	d.	£.	s.	d.
1810,	Port-Glasgow,	1,531,025	13,744	17	8			
	Greenock,.....	8,431.384	91,602	6	5			
		9,962,359				105,347	4	1
1811,	Port-Glasgow,	2,285,728	19,348	18	3			
	Greenock,.....	8,716,995	86,205	5	11			
		11,002,723				105,554	4	2

This, in some degree, shews, the *present extent* of the cotton trade in the west of Scotland, and justifies the remarks made, in page 250, on its importance, and on its effects on the commerce of the Clyde.

c Of the original land tax of this county, amounting to £902 2*s.* 5*d.* sterling, about £160 have been redeemed, so that the amount of land tax is reduced to £742 2*s.* 5*d.*

d The assessment for the wives and children of militia men is commonly 12*s.* on each £100 Scots of valued rent.

With regard to the influence of commerce and manufactures on agriculture, it is certainly favourable. Manufacturing and commercial towns, by creating capital, furnishing manure, &c. contribute to the improvement of the adjacent country; and the land owner not only derives income from every production of the soil, but also with ease realizes a very considerable revenue from the mines, lakes, shores and rivers. Trade and manufactures have introduced a great degree of wealth; and, by increasing the number of inhabitants, have ensured to the farmer a ready sale, and a better price, for such articles of farm produce as cannot be imported from a distance; circumstances clearly proved by the tables of prices of provisions already given. They have also considerably advanced the rents of landed property, as may be easily inferred from what has been stated relating to the great towns of Paisley, Greenock,[a] &c. And merchants and manufacturers have given an example of industry and attention to business, which may have operated on the class of farmers, and roused them to new exertions.

But commerce and manufactures have, no doubt, been attended with some disadvantages to the farmer and the land owner. They have advanced the price of labour; may have occasioned a greater degree of dissipation among the lower classes; increased the numbers of the poor; and, what is of chief importance, they have diverted the attention and the capital of the county from the important operations of

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a See pages 71, 216, 224 & 271.

agriculture. Men of ability and capital sufficient for extensive improvements, seldom devote themselves to the cultivation of the ground; and the important business of the farmer has been left, in many cases, to the lower classes of the community, to persons deficient both in means and in skill. It is hoped however, that, in these respects, agriculture, which has already made great advances, will hereafter be on a better footing in Renfrewshire. In this important occupation there may be gained such a profit as is suited to the capital which it requires, and the small risk to which that capital is exposed. The disappointments experienced in trade may incline men to employ a greater stock in this more sure, though less profitable, branch of industry. The spirit of speculation being checked by misfortune, and the profits of manufacturing moderate, the balance between agriculture and manufactures may become even;—they may become mutually subservient;—and each prove highly beneficial to the other. The latter, in times of prosperous trade and successful adventure, had the tendency to engross the labourers from the country; but, for years past, there seems to have been a sufficient number of hands for the operations of the field; and, it is presumed, the rates of wages at present are such as the farmer can afford. Upon the whole, the commerce and manufactures of this district must be pronounced friendly to the farmer. A portion of that opulence which is so much diffused among different classes in society, is often employed in improving the soil; and several gentlemen of landed property, though deeply engaged

in manfuacturing and commercial pursuits, have, like many of the other landed proprietors, prosecuted beneficial and successful cultivation. There is reason to indulge the pleasing expectation, that agriculture, animated by such examples, by the abundance of wealth, and by a full demand for all her productions, may rise to a very high degree of vigour, and render Renfrewshire, already one of the most beautiful, also one of the most productive, counties in the kingdom.

SECTION VIII.—POOR.

In all countries, the laws and regulations for the management of the poor;—for administering relief to them;—and bettering their condition, are of the greatest consequence. In Renfrewshire, where their numbers are increasing, as already mentioned,[a] and where the funds for their relief require to be proportionally augmented, inquiries on this subject are of peculiar importance. In this section, therefore, a short account shall be given—of the different modes of providing for the parochial poor—of the institutions for the indigent sick—of the provision made for the education of poor children in the towns, and of young persons at the various manufactories;—to which shall be added some notice of the societies formed among the working classes for the relief of their own members.

a See page 80.

The law of Scotland respecting the poor, is contained in a variety of acts of parliament[a] and acts of privy council, ratified by parliament. Though they are far from being explicit, and not at all accommodated to the present state of the country, there is however an act of the privy council of Scotland, dated in 1692, which is most distinct, is understood to be the law of the land, and is perfectly applicable to what is called a *landward parish*, that is a parish which consists only of landholders and farmers. By that act, the *heritors*, or landholders, of each *landward* parish are directed to meet, along with the minister and kirk session, to make up a list of the parish poor, and to lay on an assessment for their support; the one half of which is to be paid by the heritors, either according to their valued rent, or otherwise, as the majority, so meeting, shall agree, and the other half to be paid by the tenants and possessors according to their means and substance, or, in other words, according to the amount of their fortunes. But, though this is the law of the land, *assessments* have been but seldom resorted to in country parishes. The poor in Renfrewshire, and in all the other counties of Scotland, were, in general, assisted or relieved, as already mentioned,[b] by weekly collections at the churches;—by dues received for the proclamation of bans of marriage;—by small sums for the use of mort-cloths;—and by the interest of donations which had been given to the kirk-session, for behoof

a See particularly act 1663. c. 16.
b Page 80.

of the poor, by charitable persons. An account was taken, for the most part quarterly. of the produce of those small funds, which was distributed, in a most frugal and judicious manner, by the minister and elders, to necessitous persons living in their own houses, with whose circumstances they were well acquainted. —But the small sums thus united and distributed, could scarcely be called a provision, or maintainance, for the poor; they only served to alleviate distress; by affording aid to persons who could still apply themselves to some branch of industry, or by furnishing some necessaries to the aged and infirm, who lived in the families of relations, and whose wants were so few that even the pittance that could be afforded from those slender funds was a kind of support. The sums distributed were so small, that, in populous districts, begging became the common, and almost necessary, resource of the poor. The practice had been so general in this county, and was found so oppressive, that, upon the suggestion chiefly of the farmers, the justices, about the year 1784-5, resolved to apply some means to suppress it. It became necessary, in the first place, to make provision for supporting the poor in their own houses. Accordingly in some parishes a legal assessment was had recourse to; in others voluntary contributions were resolved on; and in others, general subscriptions were set on foot, to supply the deficiency of the ordinary funds. For some years a very moderate assessment was sufficient, and the two other measures, which were thought easier and safer expedients, fully answered the end in view. The numbers of the poor, how-

ever, in late years having rapidly increased, partly from the extension of the manufactures which have attracted work people from all quarters, partly from the great numbers of widows, wives and children of soldiers and sailors that have been thrown upon the parishes, as already mentioned,[a] heavier assessments have become necessary, and different parishes are beginning to find that contributions and subscriptions are very inadequate substitutes for the legal mode of supporting the poor. These last measures, it is suspected, must be abandoned, and that of assessment more generally adopted. It ought, however, to be well considered in Renfrewshire, that the old statutes of the seventeenth century, which respect *landward parishes only*, are inapplicable, in the nineteenth to a district far advanced in manufacturing and commercial prosperity: and, until an act is obtained to explain and amend those old Scots statutes, voluntary contributions ought still to be followed by all classes with their usual liberality.

Tables of the numbers of paupers in each parish of the county, and of the sums collected and distributed for their relief shall be afterwards given. It may be proper previously to narrate a few circumstances relating to the management of the poor in the great towns and villages.

The poor, in the *town of Paisley*, have been for a long period either occasionally relieved in their own houses, or admitted into the town hospital.

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a See page 80.

The ministers and elders of the three town parishes, compose what is called the *general session* of Paisley; and they have commonly thrown into one fund the sums collected for charitable purposes, and the donations made to the poor. From the Statistical account it appears, that, in 1791, the average number of poor, for two years, either occasionally relieved or entirely supported in their own houses, exclusive of those maintained in the hospital, was 240; besides twenty-six children at nurse, and twenty-five at school. "The collections at the church "doors were, at an average, £393 12*s.* 1*d.* each "year;" besides about £108 arising from proclamation of bans of marriage, dues for the use of the mort-cloths, interest of money, &c. so that the whole yearly sum for maintaining the poor, nursing and educating children, was only £501 12*s.* 1*d.*: and this sum was raised in a way that nobody could feel as oppressive; four-fifths of the whole being the weekly contributions at the church doors of three large congregations, and given mostly in half-pence, except upon extraordinary occasions. But, of late years, the sums arising from the collections and other funds just stated, have been found inadequate for the above purposes: the ministers and elders, who compose the kirk-sessions, cannot therefore out of those funds relieve the ordinary poor in their own houses, and at the same time provide for destitute children, either foundlings, orphans, or the children of soldiers in the regular army. The charge on account of children has therefore been devolved upon the directors of the hospital; and, for

two or three years past, they have expended out of the assessment laid upon the inhabitants for supporting that institution, about £260 per annum for nursing and maintaining about forty or fifty children of the above description, till they arrive at four or five years of age, when they are admitted into the hospital. It has likewise been necessary of late years to put into the hands of the ministers and elders, about £75 per annum out of that assessment, in aid of the contributions at the church doors: the whole funds under their management are therefore, at present, applied solely for relieving persons who reside in their own houses, and for occasional charity. The funds under their management, and the application of those funds on an average of two years, 1810 and 1811, were as follow.

Funds.

	£.	s.	d.
Collections at the church doors,.....	705	7	2
Sums from proclamations of marriage,....	54	9	0
Dues for the use of mort-cloths,.....	21	2	6
Donations, &c.....	21	10	0
Sum from assessment, as above mentioned,	75	0	0
	877	8	8

Distributions.

	£.	s.	d.
Paupers on the ordinary roll,.....	502	1	10
Occasional charity, coffins, &c.....	375	6	10
Total in one year,	877	8	8

The number of ordinary poor on the roll is from 140 to 155: the occasional charity is distributed in small sums among a great variety of necessitous persons.

The town hospital was erected in 1751-2 for the reception of the aged and infirm poor, and for the maintaining and educating of destitute children. It stands in an airy situation with a large garden adjoining to it. The expense of the original building was £584 4s. 9d. Several additions have been made to it since the above period, and it may now admit nearly 200 paupers. It is under the management of fifteen directors, annually chosen, by the town council, one of whom, in rotation, is a daily visitor. A committee of five of their number meet in the hospital every week, and the whole fifteen hold stated meetings once every month for regulating all matters connected with the institution. The immediate care and superintendance of the children and persons admitted, are intrusted to a mistress, with one or two housemaids, and a master who acts as teacher and clerk, and from whom both old and young have the benefit of moral and religious instruction. A physician or surgeon also regularly attends the house. Besides the above paupers, lunatics and imbecile persons, who have no friends to take charge of them, are admitted, and subjected to necessary confinement. Of this description there are at present a considerable number of grown persons, more or less subject to mental disease. The whole is "conducted on the strictest principles of œconomy, and with great attention to health, cleanliness,

"and good order; and has hitherto answered the "ends of its institution, as much perhaps as any of "the kind."[a] As a proof of *healthiness*, the small number of deaths among the children in this institution may be here stated. The average number of young persons is about 60, and no death has occurred among them for *very near two years:* the total bill of mortality of those children for ten years is only *nine*, and the nine who died were of weak constitution. The children are inoculated for the small pox, before being admitted; formerly in the usual way and now by vaccination. Their diet is oat-meal made into porridge, butter-milk, barley-broth, potatoes, and a proportion of butcher meat; the leading article being oat-meal.

The numbers maintained in the hospital, and the annual expenses at different periods, were as follow:

	Children from 4 to 12 years old.	Infirm & aged.	Expense. £.	s.	d.
1781	42	25	270	1	11
1788	60	46	471	1	2
1789	75	46	524	6	0
1790	66	54	520	7	4
	201	146	1515	14	6

a See Statistical Account, vol. vii.

From this account it appears that the average expense of each person yearly in 1778-9 & 90 was £4 7*s.* 4*d.*; but after deducting from the whole expense the produce of work performed in the house, which in three years amounted to £223 10*s.* 8*d.* the expense of each person to the public will be found to be only £3 14*s.* 5*d.*

But, a great rise of the price of all the necessaries of life, and an increase of the numbers of aged and infirm persons admitted to this institution, have augmented the annual expense of late years, in some cases, to near three times the former amount; as appears from the following state of the expense of this charity, and of the numbers maintained in it.

	Children from 4 to 12 years old.	Infirm & aged.	Expense. £.	s.	d.
1808	51	80	1289	15	8
1809	63	74	1371	5	4
1810	59	83	1279	9	11
1811	60	87	1293	9	6
	233	324	5234	0	5

Hence the expense of each person yearly has been of late £9 7*s.* 11*d.*; and when the produce of the labour of the house is deducted, which amounts to about £82 per annum, the expense of each person to the public is £8 16*s.* 1*d.*

The children are educated and brought up to industry from their earliest years. About the age of

twelve or thirteen, the boys are bound apprentices to tradesmen or artizans, and the girls are sent to service.

The annual expense for food alone is about £750. Above £300 of this sum are laid out on oat-meal, about £180 on butcher-meat, and the remainder on milk, barley, potatoes and other vegetables, cheese, herrings, &c. &c. About £110 are expended annually for clothes, about £30 for shoes, about £75 for coals, and small sums for occasional repairs.

But besides the expense of the hospital, the managers, as before mentioned, bestow about £75, to be distributed by the ministers and elders, along with the collections at the churches, to persons in their own houses, who may be termed *out-pensioners*. The managers of the hospital also, as already stated, defray the expense of children at nurse, amounting of late years to about fifty infants, and occasioning an annual outlay of about £260. But at present (1812) there are fifty-seven children on the *nursing list*, and the expense on this head now exceeds that of any former period, being about £30 per month. A very few sums have been bequeathed for this institution since its first erection. The sum of £74 8*s.* 10*d.* left by charitable persons since 1760, was expended on additional buildings. Nine small legacies amounting to £127 10*s.* one of £100 in 1795, and a recent donation of the like sum of £100, are applied for the immediate relief of the poor in this asylum. The annual expense is defrayed by an assessment on the inhabitants, traders, and owners of property in the town, by assessors nine in number, cho-

sen from among the directors, who impose the tax, not according to the rental of property, nor according to the capital belonging to individuals, but, in proportion to what may be supposed to be the annual income. The owners of property in the town, if resident in other parishes, are not taxed for the property of which they may be possessed within Paisley; and the individuals of the working classes are charged with 3*s.* each per annum. This is the *lowest* assessment: the *highest* is £30 yearly, and between these two extremes, the rate is varied according to circumstances. The persons assessed may be at present about 3000, of whom the far greater number are for 3*s.* each. The assessment in 1781 amounted to £270 1*s.* 11*d.*; in 1791, to about £500. The sums actually levied for each of the three last years, ending at Whitsunday, were;

	£.	s.	d.	£.	s.	d.
1808-9,	1425	4	9			
1809-10,	1632	17	6			
1810-11,	1536	13	0			
	4594	15	3			
Average of these three years,.....				1531	11	9
To this add collections at churches, ...				802	8	8
Sum, the amount of the present annual provision, for the poor of Paisley,....				2334	0	5

It may be here observed, that, this sum is exclusive of the distributions to the poor from the collections

by *dissenting* congregations in the town and suburbs, which are not over-rated at £1250 yearly: nor are the sums distributed by *benefit societies*, or *friendly societies* to their own members, which may amount to £1600 a-year, taken into view: nor the voluntary contributions for the support of the house of recovery, because these subjects shall be afterwards considered.

The *Abbey parish*, or *Parish of Paisley*, which consists of the suburbs of the town and of a large district of surrounding country comprehending Johnstone and other villages, is one of the most populous parishes in Scotland. Till 1736, the parish extended over the town of Paisley; and though that town is now disjoined from the old parish, still the parish of Paisley consists of above 10,000 English acres, with a population of 16,785 souls. Of these there are in the immediate suburbs of the town 9604; in the village of Johnstone 3647; and in the country part of the parish and small villages 3534. About thirty years ago, the number of souls did not exceed 7000, consequently there has been an increase of about 10,000 persons, consisting chiefly of new settlers, and occasioning, as shall be presently stated, a rapid increase of paupers, particularly in the suburbs of Paisley. In the years 1782, 1783, 1784, the sum expended for the relief of the poor amounted, on an average, to only £136 12*s.* per annum, and was merely an allowance of from 2*s.* to 10*s.* per quarter. In 1785, 1786, 1787 to £238 3*s.*: in 1788, 1789, 1790, to £381;

and in 1791 to £440 3*s*. This was distributed to the poor as follows;

	£.
Roll of ordinary poor, about...	284
Occasional charity.....	46
Foundlings and deserted children,.....	74
Clothing, house-rents, school-wages, coffins, &c.	36
	440

The number of enrolled poor at that period was between 90 and 100, and the allowance from 4*s*. to 26*s*. per quarter. But since that period, from causes which have been already stated,[a] the number of paupers and deserted children has increased most rapidly, as will appear from the following table:

	Aged and infirm.	Children.
1801-2,	158	41
1804-5,	168	45
1810-11,	219	41
1811-12,	245	38

And there have in general been about 100 poor children educated annually. The sums distributed for three years ending the 1st of June 1802, 1805 and 1811, were as follow;

a See pages 80 and 291.

	1801-2			1804-5			1810-11		
	£.	s.	d.	£.	s.	d.	£.	s.	d.
Ordinary roll,.....	601	12	0	641	15	0	962	4	0
Occasional charity,	112	7	5	81	14	0	202	8	3½
Orphans, &c.....	227	13	10	255	3	0	280	12	5
Clothing,.....	114	18	5	153	18	4	204	13	7½
Coffins, ...	13	2	6	12	3	10	22	1	0
Education,.....	21	7	8	30	5	4	102	12	0½
Collector's salary,	26	5	0	26	5	0	26	5	0
Interest of borrowed money, law business, printing, &c.	30	11	5	67	13	7	41	15	11
New mort-cloth,...	0	0	0	0	0	0	18	16	3
	1141	17	7	1268	18	1	1861	8	6½

During the current year, from the first of June 1811 to the first of June 1812, some savings have been effected on books and school wages and on the expense of maintaining orphans, but all other branches of expense are augmented. The additional number of paupers, the consequence of low wages and high prices of provisions, has increased the demands for the ordinary poor and for occasional charity, so that the expenditure for the present year, will probably exceed £2000.

The allowance for a grown person is from 13*s.* to £2 12*s.* per quarter, of which last there are only five cases; and, the sums paid for supporting orphans are from £1, to £3 5*s.* per quarter.

Till the year 1785 the poor were supported in this

parish, as in others, by collections at the church door, interest of some donations, dues for mort-cloths, &c. &c. At that period it was proposed to put a stop to vagrant begging, as already mentioned, and therefore an assessment was resolved upon. The assessment for the first year was £152: from this, partly in consequence of the high price of meal in 1791, 1792, it rose to £415; and this sum, with about £125 per annum arising from the collections at the church, &c., making a total of about £540, was sufficient for the annual demand for some years. But after the years 1793, 1794, when the effects of the war began to be felt, it became necessary to impose higher assessments. The scanty crops and consequent high price of provisions in the years 1799, 1800 and 1801, at once adding to the number of paupers, and rendering their maintenance more expensive, required an assessment of above £1000. The unfavourable state of trade in some subsequent years, increased the number of claimants for charity, and raised the assessment to £1500. This rise did not, however, keep pace with the increasing demands; and a debt of £400 being now incurred, an assessment of £1700 has been found necessary to meet the expense for the year ending June 1812. The assessment in all these cases is in addition to the sum arising from collections at the church door, proclamations for marriages, &c. &c. which, of late years, averages about £200 yearly, and is thrown into the common fund. But this tax is not effective: of at least 1500 persons among the working classes assessed in three shillings each, not above

one-third of their number make payment, and, many of these not till compelled by legal means. This deficiency, with the heavy demands that are still upon the funds, has produced a debt of £300 in addition to that of £400 formerly incurred from similar causes.

Mode of management.—The heritors and kirk-session at a meeting held annually in the month of June, endeavour to ascertain, from the expenditure of the preceding year, the rate of wages, and the price of provisions, what sum it will be necessary to provide for the ensuing year: deducting from that sum the probable amount of the church funds, the remainder is assessed upon the parish: and the parish being divided into sixteen districts, and two overseers being named by the meeting for each district, it is left to the whole body of overseers to apportion the assessed sum upon the individuals. The same overseers meet quarterly with the ministers and elders, when they examine the roll of ordinary poor, consider the petitions of persons claiming relief from the funds, and grant them such aid as their circumstances may require: it being understood that the several overseers shall be able to state minutely to the meeting the circumstances of every pauper and claimant in their respective districts. These overseers, by the original plan of management, were to have been chosen in equal numbers from the classes of heritors, farmers and householders: but it being difficult to find heritors who are willing to undertake the troublesome office, the overseers are,

in general, chosen from among the most respectable manufacturers and farmers.

Different plans have at different times been adopted at meetings of the land-holders and kirk-session for fixing the rule of assessment. The plan originally adopted at meetings held in 1785, as most suitable to the circumstances of the parish, and somewhat analogous to the mode prescribed in the old Scots statutes for raising the supply for the maintenance of the poor, was, to "proportion the sum upon the "heritors, householders and tenants in the parish, "regulating the contribution to be paid by each "individual by his property in the parish, his trade, "his means and substance, and having regard to "every circumstance that may render the contribu-"tion as equitable as possible."[a] But, the spirit and meaning of this regulation, was in many instances departed from, by recurring to the valued rent as the rule for assessing landed property. This rule is extremely unequal; lands of the same *valued rent*, being, from various circumstances, in many instances, of very different real value, and it is certainly unreasonable when that is the case, that they should be assessed to the same amount. It seems therefore highly expedient to resort to the *real rent* as the rule for assessing property in lands and tenements, and it is to be hoped that in levying the assessment in future, the heritors will see cause to adopt that rule.

"It is discretionary, in the general meeting, to

a See MS. minutes of parish meetings, 4 Aug. 1785.

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Assessment for 1801-2.

No. of contributors.		Amount.		
3	at from £55 to £75.....	£189	0	0
3	at from £30 to £40.....	107	10	0
4	at £24 each.....	96	0	0
1	at £20.....	20	0	0
6	at from £12 to £18.....	84	12	0
8	at £10 10*s.* each,.....	48	0	0
11	at from £6 to £8 8*s*.....	77	3	0
17	at from £5 to £5 10*s*.....	87	7	0
20	at from £3 15*s.* to £4 15*s*.....	81	6	0
22	at from £2 15*s.* to £3 13*s.* 6*d.*	67	9	6
38	at from £2 to £2 10*s*.....	82	6	0
87	at from £1 to £1 15*s*.....	111	7	6
225		£1088	1	0
	And a numerous class under 20*s.*	321	0	0
	Sum assessed,	£1409	1	0

Assessment for 1810-11.

No. of contributors.		Amount.		
2	at from £105 to £155.....	£260	10	2
3	at from 50 to 80 guineas,.....	203	14	1
7	at from £20 to 30 guineas,....	179	6	2
8	at from 10 to 15 guineas,.....	122	15	7
4	at from 8 guineas to £10.....	35	17	8
9	at from £6 to £8.....	63	18	7
12	at from £4 to £6.....	56	1	9
45	Carried forward,	922	4	0

No. of contributors.		Amount.
45	Brought forward,	£922 4 0
19	at from £3 to £4..	62 12 6
37	at from £2 to £3	84 9 8
45	at from 30s. to 40s	72 8 8
86	at from 20s. to 30s	96 2 8
101	at from 12s. to 18s	74 3 0
222	at from 7s. to 11s	95 14 0
328	at from 4s. to 6s	81 18 6
1399	at 3s	209 17 0
2182	Sum assessed.	£1699 10 0

The cousequences of assessing the working classes of the community are obvious. One thousand of their number, as has been already stated, declare their inability to pay, and if the demand is enforced, what effect follows? They are reduced to the state of paupers, and claim a share of a fund to which they have probably been contributors It is a most erroneous principle to make the poor support the poor; and direct taxes upon a working man are attended with many disagreeable circumstances; of which the cottage tax is an obvious illustration.

In the *Village of Johnstone*, which, as already mentioned, is situated in the west part of the parish of Paisley, the inhabitants, by agreement with the heritors of the parish, bind themselves to support their own poor, in consideration of their being allowed to retain the collections made at their chappel.

The number of poor at present on their roll is fifteen aged and infirm persons, five children under nine years of age; all of them are allowed weekly pensions, the lowest 1*s.* per week, the highest 3*s.* 6*d.*; and the amount at present distributed is £1 15*s.* per week; but this is subject to continual variation. The sums collected at the chapel and dissenting meeting-houses at this village, are not applied to the poor on the roll, consequently the sum for their support is raised by assessment. The amount for the current year is £103 13*s.* 9*d.*, and the mode of assessing is by a tax on the inhabitants and on house rents The rate on house rents is 1½*d.* per pound, and the annual assessment on individuals and on trading companies is;—1*s.* 6*d.* on labourers;—2*s.* on weavers and operative cotton spinners;—from 5*s.* to 15*s.* on grocers and innkeepers according to the extent of their business;—and cotton mills are charged in proportion to their extent, the smallest being 5*s.*, and the largest eight guineas, per annum.

In *Greenock*, the poor till the year 1785, were, as in other parishes, altogether dependant on the ordinary collections at the church door, and on the interest of some small sums bequeathed for their use. Such donations becoming less frequent, and the poor always increasing, various plans of relief were proposed. In general, voluntary assessment or subscription was thought most eligible, and this, with the weekly collections at the church doors, and quarterly collections, which were also resorted to, for some time in a great degree, answered the expecta-

tions of those by whom it was proposed. But the quarterly collections falling short of what was expected, and the wants and numbers of the poor having increased, so that at the 1st of January 1810, a debt of £252 had been contracted for their support, it was resolved, at a meeting of the landed proprietors and inhabitants in the end of 1809, that the ordinary and quarterly collections should be continued, and that the deficiency should be made up by a contribution from the heritors in proportion to their estates, and by proportional subscriptions from the inhabitants, without having recourse to the farmers in the country part of the parish. The town was divided into nine districts, and the funds were committed to the management of the magistrates, ministers, agents for the heritors, and nine householders. Their report at the end of the year 1810, contained the following statement of the amount and application of the fund.

Sums collected.

	£.	s.	d.
Ordinary collections at the churches,...	433	13	8
Quarterly do. at do.	83	19	10
Fees on proclamations for marriage,.....	121	4	0
Do. on mort-cloths,.....	29	5	6
Donations, chiefly from fees collected by the justices of peace, on affidavits,	94	14	1
Interest, and small fines,.....	34	0	2
	796	17	3
Deduct necessary expenses,	84	5	3
Carried forward,	712	12	0

	£.	s.	d.
Brought forward,	712	12	0

The sums contributed by subscription to make good the fund necessary for the support of the poor, were;

	£.	s.			
Tax or contribution from the heritors, one per cent upon their income,.....			96	15	
And from the inhabitants,					
	£.	s.			
7 subscriptions of	10	10	73	10	
3 do. at	8	8	25	4	
3 do. at	7	7	22	1	
4 do. at	6	6	25	4	
14 do. at	5	5	73	10	
48 do. at	4	4	201	12	
34 do. at	3	3	107	2	
90 do. at	2	2	189	0	
183 do. at	1	1	193	3	
216 do. from 4s. to 20s.			95	10	
					1101 11 0
					1814 3 0

These sums are applied as follows,

To 477 ordinary poor (who have of wives, children, and other persons dependant on them, 326,) with 5 insane paupers; at from 1*s.* 6*d.* to 16*s.* per month,.....	1149	18	0
To 305 persons relieved by occasional supply,.....	304	12	6
To 21 orphan children, at from £1 10*s.* to £5 per quarter,.....	122	5	0
Funerals of paupers, clothing, &c. &c.	53	11	5
	1630	7	11

From the preceding accounts, which are taken from a printed report of the committee for managing the poors funds, it must be obvious, that the mode of both raising and applying the supply for the poor was judicious and frugal. Orphans and insane paupers were wholly supported from the fund, therefore the small sums allowed to others, were merely an aid to stimulate their industry; in many instances they were bestowed as a reward for exertion, and hence, as the committee expresses themselves, "an almost incredible number were preserved from "begging, idleness and vice." These beneficial effects, obtained at so small expense, are strong arguments for continuing a subscription in lieu of assessment. The laws of Scotland for making provision for the poor are inapplicable to such a town as Greenock; and, even although a special act of parliament

were obtained suited to the circumstances of that town, still the voluntary subscription, if equally productive, would be preferable to a legal assessment. The conscientious contributor, instead of being dictated to by an assessor, consults his own feeling, and assesses himself in his true proportion, according to his means, or the exigencies of the case. All ranks in that rising town ought still to concur in voluntarily raising a sufficient fund. The improvident conduct of seamen, on their return from a prosperous voyage, is well known, and it is so common in all sea port towns, that there will no doubt be at all times many claims on the humanity of the traders of Greenock; nor is it probable that the causes of the present wants of the poor are to be so speedily removed as to supersede the necessity of the usual contributions. Difficulties occur in the town of Greenock, as to the management. Although the town consists of three separate parishes, to one of which a considerable district of country belongs, yet there are strong reasons that, in regard to the poor, they should be considered as one, and it may probably be inexpedient that each parish should be under separate management. The land owners and inhabitants of Greenock have resolved that the poor shall be provided for by legal assessment, but whether the three parishes shall be under joint or separate management is not yet decisively settled.

In the *Town of Port-Glasgow* the poor in the year 1790, amounted to 104; the sum alloted to each of them was from 6*d.* to 3*s.* per week, according to

their circumstances; and the whole sum distributed that year amounted to £297. The poor's roll in 1808 consisted of 106 weekly pensioners, and the annual expense was about £340. The fund for their support arises from,

	£.	s.
Interest of the capital stock of £650....	32	10
Weekly collections of parish church & chapel.	254	0
Proclamation of bans of marriage.....	29	10
Dues of mort-cloths,.....	22	7
Total per annum,	338	7

At the time the Statistical account was published, part of the fund arose from an assessment on the inhabitants, but the funds above stated render assessments unnecessary.

In the *Parish of Neilston*, the numbers of poor, and the sums distributed at different periods were;

	Paupers.	Funds.			Distribution.		
		£.	s.	d	£.	s.	d.
1786,.....	30	67	7	4	64	9	6
1790,.....	34	64	5	3	73	1	4
1796—1797 averaged,	39	90	9	9	99	6	3
1801—1807 do.	42	118	18	7	168	17	1
1808—1809 do.	60	123	0	5	247	12	10
1810—1811 do.	62	138	8	9	230	1	9

The sums at present allowed to paupers are from 10*s.* to £2 per quarter: and the roll consists of sixty-three grown persons, who receive their small pensions in their own houses.

The ordinary funds being, as is obvious from the above table, altogether inadequate for the wants of the poor of a parish, where, since the Statistical account was written, the paupers have doubled, and where the expense of supporting them is now more than three times the former rate, the heritors have been under the necessity of making good the deficiency by voluntary donations; and by applying to the support of the poor the rents of the pews in an addition which, at their expense, was made to the fabric of the church in 1797, and which the increasing population of the parish had rendered necessary.

In the *Parish of Eastwood*, the number of enrolled poor in 1793 was twenty-four; besides whom about ten necessitous persons received occasional supply; and eight poor children were educated at the public expense. The average annual disbursement, for ten years, for all those purposes, was only £74 2*s.* The funds for supplying the poor were the collections at the church, dues for mort-cloths, and the interest of £500 of donations which the kirk session had long retained as a sunk stock. But the population of that parish, which was then 2642 souls, being now 4845, consisting chiefly of the large village of Pollockshaws, the numbers and expense of the poor are, of consequence, greatly augmented. The number, of late years, has commonly been forty-eight,

besides infants, and persons receiving occasional charity: the quarterly allowance to each individual of the ordinary poor being from 6*s.* to 24*s.*; and the whole sum distributed through the year, including occasional charity, amounting to £253 7*s.* 3*d.* The funds, from which this sum was furnished, were;

	£.	s.	d.
Collections at the church door, &c.	83	9	2½
Extraordinary collections,.....	15	3	4½
Interest of sunk stock,.....	17	0	0
Sum advanced out of do.....	135	0	0
	250	12	7

The deficiencies of the ordinary funds being thus repeatedly made good from the parish stock of £500, which had been gradually formed for the support of the poor, that stock was found in April 1811 to be reduced to the small sum of £32. The only resource has been that of voluntary contribution, in aid of the collections at the church door; but this measure has not proved sufficiently effectual, so that it is too probable a legal assessment must be resorted to.

In the *Parish of Kilbarchan*, the poor are supported by an assessment as already mentioned;[a] and the collections at the church door have for several years been discontinued. "The method of assess-

a See page 81.

"ment was recurred to in July 1785, and was levi-
"ed as follows: The land paid at the rate of 3*d.* per
"pound Scots of valuation, one half being paid by
"the landlord, the other by the tenants. This pro-
"duced £78 9*s.* 4*d.* There was levied upon the
"householders in the town and the country part of
"the parish £21 10*s.* 8*d.*;"[a] and the kirk sessions funds produced £12; in all £112. The assessment has been gradually increasing; it amounted in 1794 to £140, and in 1810 to £228. The rate is at present precisely 6*d.* per pound Scots of valuation, which produces from the landed interest £157. The remaining sum of £71 arises from an assessment on manufacturing establishments, and from householders, chiefly in the villages of Kilbarchan and Linwood. The dues from mort-cloths, from proclamations of marriages, &c. amount to about £12; and when these are added to the sums assessed, as above stated, the amount, £240, is a sufficient supply for the poor of this parish, whose numbers are not greatly increased since 1785.—The increase of population, since that period, having been only about 1000 souls, there is not a great augmentation of paupers. They are allowed from 13*s.* to £3 5*s.* per quarter.

"The fund is managed by fifteen persons as over-
"seers, annually chosen; five of whom are heritors,
"five tenants, and five householders. To these the
"kirk-session are added. The poor are subdivided
"into classes, each class being under the inspection

[a] See Statistical Account, vol. xv. p. 496.

"of one of those overseers." The overseers also proportion the assessment on the several classes of householders, as equitably as possible; paying regard to their trade, circumstances, &c. and collect that assessment and pay it into the hands of a treasurer appointed by the general meeting: he collects the assessment on land-owners and farmers, which being equally laid on by the valued rent, the data for the calculation of that assessment remains invariably the same.

In the *Parish of Lochwinnoch*, the capital stock of £400, which belonged to the poor, is expended for their support; so that an assessment or voluntary subscription must now be resorted to.

In *Eaglesham*, the number of poor is seventeen, who are paid from 12*s.* to 36*s.* per quarter. A yearly assessment, of fifty guineas, is at present laid equally upon the landlord and tenants, which, with the collections at the church, serves for their support.

In the *Royal Burgh of Renfrew*, the poor have a capital stock of £962, the interest of which, and the collections at the church, are the provision for from twenty-five to thirty paupers, some of whom receive very small pensions, and others at the rate of from £2 10*s.* to £4 10*s.* per quarter.

Having thus given an account of the state of the parochial poor in the large towns and most populous parts of this county, it becomes unnecessary to enter

into any farther detail on this subject, by descending to country parishes, where the state of the poor and mode of management are nearly the same as when the Statistical accounts were published. In the parishes of Mearns, Inchinnan, Erskine, Innerkip, Houston and Kilmalcolm, which are *landward* parishes, no great alteration has taken place, excepting that a greater expense is incurred, chiefly on account of the rises on the price of all the means of subsistence. Still, the ordinary allowance to the poor in these six parishes is only from 10*s.* to 40*s.* per quarter. The numbers of the poor on the poors roll in each parish, and the provision for them will be seen in the following tables; the first of which contains a statement of their circumstances in 1791-94 when the Statistical volumes were published, and is chiefly compiled from that work; the second exhibits their present numbers, and amount of sums raised and annually expended, for their support.

It is to be observed, that, in the tables, the column of paupers contains only those on the roll; but the column of provision includes what was allowed to occasional poor, so that it would be erroneous to calculate from this the individual expense of each pauper, or to judge of the œconomy of the management. These circumstances can only be deduced from such details as have been given of particular parishes.

Table of the numbers of poor in 1791-94 and of the sums distributed for their relief.

Parishes.	No. of paupers	Collections at church, &c.			Interest of capital stock		Tax or assessment.		
		£.	s.	d	£.	s.	£.	s.	d
Cathcart,.....	10	15	0	0	10	0	0	0	0
Eaglesham,...	7	16	0	0	0	0	0	0	0
Eastwood,.....	24	49	2	0	25	0	0	0	0
Erskine,.....	10	21	6	0	6	0	0	0	0
Houston,.....	20	26	0	0	12	10	0	0	0
Inchinnan,.....	4	13	0	0	2	10	0	0	0
Innerkip,.....	34	39	0	0	20	0	0	0	0
Kilbarchan,...	50	11	0	0	0	0	140	0	0
Kilmalcolm,...	17	13	6	0	5	14	0	0	0
Lochwinnoch,	20	100	0	0	20	0	0	0	0
Mearns,.....	9	13	0	0	6	0	0	0	0
Neilston,.....	34	66	1	4	7	0	0	0	0
Renfrew,.....	20	26	0	0	50	0	0	0	0
Paisley-town,[a]	360	501	12	1	0	0	430	14	7
Paisley-abbey,	95	125	0	0	0	0	415	0	0
Port-Glasgow,	140	282	10	0	14	10	0	0	0
Greenock,.....	300	200	0	0	0	0	360	0	0
	1154	1517	17	5	179	4	1345	14	7
Collections at churches as above,.....							1517	17	5
Interest of capital as above,.....							179	4	0
							3042	16	0

a Includes the paupers and expenses of the town hospital.

Table of the numbers of poor in 1810-11 and sums distributed for their relief.

Parishes.	No. of paupers	Collections at church, &c.			Interest of capital stock.		Tax or assessment.		
		£.	s.	d	£.	s.	£.	s.	d
Cathcart,.....	10	20	0	0	10	0	0	0	0
Eaglesham,...	17	28	0	0	0	0	52	0	0
Eastwood,.....	48	98	12	7	0	0	154	14	8
Erskine,.....	4	33	0	0	8	10	0	0	0
Houston,.....	21	66	8	0	10	0	0	0	0
Inchinnan,.....	2	18	0	0	0	0	0	0	0
Innerkip,.....	28	60	0	0	20	0	0	0	0
Kilbarchan,...	52	12	0	0	0	0	228	0	0
Kilmalcolm,...	18	26	16	0	9	4	0	0	0
Lochwinnoch,	30	115	0	0	0	0	60	0	0
Mearns,.....	12	30	0	0	8	15	0	0	0
Neilston,.....	61	138	9	9	0	0	90	12	0
Renfrew, ...	28	60	0	0	48	12	0	0	0
Paisley-town,[a]	337	802	8	8	0	0	1531	11	9
Paisley-abbey[b]	303	200	0	0	0	0	1802	3	9
Port-Glasgow,	106	305	17	0	32	10	0	0	0
Greenock,.....	503	712	12	0	0	0	1101	11	0
	1580	2727	4	0	147	11	5020	13	2
Collections at churches as above,.....							2727	4	0
Interest of capital as above,.....							147	11	0
							7895	8	2

a Includes the paupers and expenses of the town hospital.
b Includes the assessment, &c. of the village of Johnstone.

Institutions for the relief of the indigent sick.—The Royal Infirmary of Glasgow, established by charter in 1791, was erected in 1792-3, and opened for patients in 1794. The objects of that extensive charitable institution are not confined to the city of Glasgow. It was intended for the diseased poor of the populous districts of the West of Scotland, of course its benefits extend to Renfrewshire: and numbers of gentlemen in this county being subscribers, they are entitled to recommend patients in terms of the regulations. By these regulations it is provided, that incorporations, or societies, from which regular and perpetual recommendations may be expected, who have contributed £50, may recommend two patients annually, but not to have more than one patient in the Infirmary at the same time; and those who have contributed £100, may recommend four, and have two patients in the House at the same time. Several parishes in Renfrewshire have contributed £50, and some £100, and obtained the right of recommending patients, the power of nominating being vested in the minister of the parish.

Within the county of Renfrew there are two institutions somewhat similar to the Royal Infirmary; and which, though of small extent, and limited as to their object, have been attended with most salutary effects; these are the Dispensary and House of Recovery in Paisley, and, the Hospital and Infirmary in Greenock.

The *Paisley Dispensary*, commenced in 1786, and

has been attended with very happy effects among the lower classes of industrious inhabitants of the town and suburbs. It has been uniformly supported by yearly subscriptions; and though the amount of these at the time the Statistical account was published in 1792 amounted to only about £130 yearly, yet much distress has been alleviated, by the distribution of medicines, and the gratuitous advice of the medical practitioners in Paisley. But this most valuable institution was still imperfect. There was no building where the patient might be properly treated, and to which persons labouring under epidemic disorders might be removed, so as to arrest the progress of infection; the subscribers therefore to this charity, while they continued the institution of the Dispensary, adopted the resolution of building a *House of Recovery*, which was opened in the year 1805, for the reception of patients. It is built on the bank of the river Cart in an open airy situation;—with a garden around it;—and not obstructed by other buildings. The advantages of such institutions are so fully understood, so universally acknowledged, and so justly appreciated, that it is unnecessary to say any thing in their favour. It will be enough, merely to state the management for the three years 1809, 1810, and 1811, as drawn from the annual reports relating to that charity. From these it appears, that the total number of patients admitted to the benefit of the conjoined institution, since the opening of the Dispensary in 1786, was 8057: that there were admitted in all during the years 1809, 1810, and 1811, 977 patients, of whom—

Cured,.....	684	
Relieved,.....	92	
Died,.....	97	
Sent to the Town Hospital,.....	6	
Left the town,.....	46	
Dismissed for irregularities,.....	8	
Sent to the Lunatic cells,.....	1	
Remained on the books 31st Dec. 1811,	43	
		977

Of the above number, there were 119 received into the House of Recovery, during those three years. Sixty-one of those had fever, some of them contagious in a very high degree: nine of them died, one left the house convalescent, the other fifty-one were dismissed perfectly cured.

Twenty-three were admitted who had met with severe accidents: two of them died, seventeen were dismissed cured, two greatly relieved, one was sent to the Town Hospital, and one remains.

Thirty-three were admitted labouring under other complaints: of these, eight died, three were dismissed by desire of friends, seven were greatly relieved, twelve were dismissed cured, and three remain.

One admitted under small-pox was cured, and one under measles remains.

An account of the receipt and expenditure for the same three years will give a view of the œconomical mode of managing this charity.

The whole receipts were as follow;

	1809.			1810.			1811.		
	£.	s.	d.	£.	s.	d.	£.	s.	d.
Subscriptions and donations,[a]	371	17	3	287	18	6	206	10	8
Interest,	35	17	1	24	6	6	25	1	4
Public collections at churches,	43	15	0	53	14	10	0	0	0
Payments from house patients, &c	7	3	6	15	7	6	2	0	0
Total receipt,	458	12	10	381	7	4	233	12	0

Expenditure.

	1809.			1810.			1811.		
	£.	s	d.	£.	s.	d.	£.	s.	d.
Medicines,	45	18	7	44	9	5	49	15	6
Provisions, coals, &c.	97	12	4	108	7	5	86	2	6
Wages,	61	16	4	77	14	0	60	10	3
Furniture,	46	13	11	54	2	1	29	14	8
Repairs and improvements on house and garden,	25	7	10	64	0	0	35	15	4
Miscellaneous articles	14	5	0	32	3	9	17	4	10
Total expenditure,	291	14	0	380	16	8	279	3	1

a The greater amount of this article in 1809, was owing to a donation of £100.

The whole fund or stock belonging to this charity on the 31st of December 1811, amounted to £438 4s. 8d.; to which may be added a recent bequest of £100 by an opulent trader of Paisley, not yet brought to account. The subscriptions of individuals are from one to five guineas yearly, and the amount of them for 1812 is £320, so that this excellent institution is likely to become more extensively useful. The whole management of the conjoined institution is committed to eighteen gentlemen chosen by the subscribers, together with those who are qualified by their subscriptions of three guineas or upwards to act as managers. The medical department is gratuitously undertaken by the physicians and surgeons of Paisley; the more immediate care of patients is committed to an apothecary, and the internal management of the house to a nurse or house-keeper.

Although there have been at Greenock for a considerable time, distributions of medicines to the poor, yet an institution, similar to that of Paisley, was much wanted, and found to be absolutely necessary in that crowded town. The necessity of a House of Recovery, to be appropriated for the reception of persons afflicted with infectious disorders, so as to check contagion in its commencement, was strongly felt in the end of 1806. A malignant fever, introduced at that time by some foreign seamen, carried off a considerable number of inhabitants, and it was justly observed that "their lives might in all "probability have been preserved to their families "and the public, if the means had existed of check-"ing the contagion, by the immediate seclusion of

"those by whom the disease was imported." [a] In consequence therefore of a donation of a quarter of an acre of land from Sir John Shaw Stewart the superior, and of liberal subscriptions and donations from the merchants, inhabitants and various societies in Greenock, the *Hospital and Infirmary* of that town was erected in 1808, and opened for the reception of patients in June 1809. The expense of erecting and furnishing this building, including the value of the small garden and site of the building, amounted to £2394 10*s.* 6*d*; and the subscriptions and donations for defraying this expense;—for supporting the charity for two years;—and for raising £500, in aid of the fund for a Bridewell or Work-house, were;

	£.	s.	d.
Donation by the superior, one-fourth of an acre of land, value.....	420	0	0
Subscription by Greenock magistrates,..	200	0	0
Do. by the magistrates of Port-Glasgow,	100	0	0
Do. by the Society of wrights,.....	100	0	0
Do. do. of coopers.....	70	0	0
Do. 13 individuals or societies, £50 each,	650	0	0
Do. 2 do. or do. at £30 and £31 10*s.*	61	10	0
Do. 8 do. or do. at £25 each,.....	200	0	0
Do. 16 do. or do. at £20 and £21,....	323	0	0
Do. 9 do. or do. at £15 and £15 15*s.*,	140	5	0
Do. 63 do. or do. at £10 and £10 10*s.*,	643	10	0
Carried forward,	2908	5	0

a See printed report of the managers.

	£.	s.	d.
Brought forward,	2908	5	0
Do. 106 from £1 1s. to £7 7s., ...	511	6	0
Legacy from a lady,.....	150	0	0
Collections at churches, interest, &c. &c.	217	6	9
	3786	17	9

In nearly two years, viz. from the 14th of June 1809 to the 2d of May 1811, there were admitted into this infirmary 150 patients, of these

Cured,.....	108
Relieved,.....	15
Died,.....	14
Dismissed for irregularity,.....	4
Made an out-patient,.....	1
Discharged at his own request,.....	1
Incurable,.....	1
Remained in the house on 2d May 1811,.....	6
	150

Besides, 149 out-patients received medicines and advice, and a considerable number of these have been attended in their own houses by medical gentlemen of the institution.

The ordinary expenses of this institution will be best illustrated by the following abstract of the account of expenditure for the above period.

	£.	s.	d.
For medicines,	75	9	0
Wine,	53	0	1
Provisions, coals, &c.	203	13	8
House-keeper and nurse's wages,	37	19	7
Repairs, gardeners' wages, &c.	17	8	8
Ground-rent and feu-duty,	45	8	4
Advertising, printing, insurance, incidents, &c.	36	16	1
	469	15	5

The committee of management consists of fourteen gentlemen of Greenock, and the ministers of that town, and of Port-Glasgow. The medical department is committed to the physicians and surgeons in Greenock; and the duty of apothecary has been hitherto discharged gratuitously by the young gentlemen who attend the Hospital for medical instruction. It appears from the medical report, that during one year thirty of the patients had contagious fever, all of whom recovered except two. "So favourable a result can only be imputed to the great advantages which an establishment of this kind possesses over any private treatment, both in the more complete ventilation of apartments, so conducive to the recovery of fever-patients, and the more exact adherence to the directions of the medical attendants; not to mention the liberal employment of wine, and other expensive articles of medicine, which the poor can rarely obtain in sufficient quantity to render any effectual service." [a]

a See printed report of Greenock Infirmary.

Education.—There is reason to believe, that prior to the Reformation, there were schools in Scotland maintained from the ecclesiastical revenues. We find an enactment in our ancient statutes, at the end of the 15th century, that all barons and substantial freeholders should put their heirs to the schools:[a] and we find, in the 16th century, our Reformers so careful for the maintenance of schools, that, when the church lands and teinds (tithes) were annexed to the crown, as already mentioned,[b] an exception was made of the teinds appropriated for colleges and schools, which, though other teinds were allowed to be alienated, were prohibited from being sold. An act of the privy council in the reign of James VI, "that in every parish a school shall be established, "and a fit teacher appointed," was ratified and extended by an act of parliament in the reign of Charles II;[c] all which circumstances shew the uniform attention which was paid to this important matter. The parochial schools were fully established by an act in 1696, improved and enlarged by a late statute;[d] and, as has been well observed, they are "a "constituent part of our civil and religious establish- "ment, and have provided for the instruction of the "*poor* of every class, to an extent, and with a degree "of success, surpassing every similar institution, in

a James IV. 1496. c. 87. "All baronis and substantious freholderis "sould put thair airis to ye schulis."

b See pages 73 and 74.

c 1663. c. 5.

d Act 43. Geo. III. c. 54.

"any country of the world."[a] In conformity to these statutes, public schools have been long established in the country parishes in Renfrewshire: and here, as in other counties, the teacher is provided with a school-house, dwelling-house, garden and small salary, formerly variable from £5 10*s.* to £11; and now not under £16 13*s.* 4*d.* nor above £22 4*s.* 5$\frac{1}{4}$*d.* per annum; which may however be augmented at future periods. The school-wages, or fees to the teacher, were, not many years ago, only 1*s.* 6*d.* or 2*s.* and are still only about 3*s.* or 3*s.* 6*d.* per quarter for english; about 4*s.* for writing, arithmetic, and book-keeping; and about 5*s.* for latin; so that the means of education always were, and still are, accessible even to persons in the lowest ranks in life; an advantage of which the peasantry of Scotland have uniformly availed themselves. In the country parishes of Renfrewshire there are thirteen parochial schools;[b] the salaries of the teachers, paid equally by the heritors and farmers, amount in all to £266 4*s.* 5*d.* In these schools poor children belonging to the parish, recommended by the heritors or kirk session, receive education, in some cases gratis, and in others at about half the fees paid by ordinary scholars, and which are charged on the parish funds. Besides the established parochial schools, there are private schools to be found in every part of the country, and in every populous village. In Paisley,

a Sermon by Sir Henry Moncreiff Wellwood Bart. for the benefit of the Lancasterian school.

b See table in the appendix.

Port-Glasgow, and Greenock, numerous public and private schools have long existed, in which various branches of education are ably taught. In Paisley, the Rector of the grammar school is provided with a good school-house and dwelling-house; his income arises from the fees of 10*s.* 6*d.* per quarter paid by each of his scholars, and the small salary of £17 1*s.* 8*d.* paid by the town. A Writing master is also allowed a salary of £8 6*s.* 8*d.* by the town, his chief emoluments arising from the fees from his scholars. In Port-Glasgow, three teachers are allowed £20 each per annum, besides fees from their scholars: and in Greenock, the Latin teacher is allowed £25, and the Teacher of writing and mathematics £30, besides the ordinary fees from their pupils. In this town an Academy for the instruction of youth in various branches of science was projected in the year 1809; but it is believed, that differences of opinion about the tax most eligible for raising a fund for this seminary, have prevented its establishment. On the subject of *educating the poor* there is, however, no difference of opinion. In all parts of the county one sentiment universally prevails, that every person ought to be taught to read. By disseminating instruction the best interests of the individual and of society are promoted and secured: and in Scotland we have the satisfaction to experience, that knowledge, virtue and happiness, are most intimately connected, and mutually support each other.

The education bestowed on children by their parents is commonly reading, writing and arithmetic. The poor in the Hospital of Paisley, or those who

are educated at the expense of the public, are taught reading only. Charity schools for the education of the poor are few in number. Excepting the Sunday schools, a school founded by Mrs Margaret Hutcheson in 1795, is the only *free school* in this part of the country. She succeeded to a considerable fortune, by the death of a brother in the island of Antigua; and, besides other useful charities, she bequeathed £1500 for a school in Paisley, to be called *Hutcheson's charity school*, for the instruction of poor children in reading, writing, and arithmetic. To the original donation there has recently been added a bequest of £500 by an opulent trader already alluded to.[a] This school is under the patronage of nine persons, viz. the three magistrates, a member from each of the three kirk-sessions, the preses of the Town Hospital, of the old society of weavers, and of the society of merchants. This is likely to prove a most useful institution; and, as the patrons or governors of the school, are not laid under any particular restrictions relating to the mode of teaching, they are adopting the Lancasterian method, now generally understood in all parts of the kingdom.

It has been already mentioned, that one of the effects of our extensive manufactures may be a relaxation of morals; and it has also been stated,[b] that the young persons, who attend the numerous large manufactories, are in a very great degree precluded from the ordinary means of education. To remedy these

a See pages 297 and 325.
b See page 253.

evils, schools have been established and are supported by the owners of several cotton mills in this county; and, about fourteen years ago, a society was formed in Paisley for establishing and conducting Sunday schools. At the former, boys and girls, employed in cotton mills or manufacturing establishments, are taught reading, in school rooms near the works: a plan which has been adopted at the mills formerly mentioned at Thornly-bank, at Pollockshaws, at Levern, and at Johnstone. At Johnstone, one teacher instructs from 90 to 100 boys and girls; at Thornly-bank, a teacher and his assistant have 140 young persons under their tuition: the Lancasterian method has not been yet adopted at any of these mills. The Sunday schools in Paisley are intended for young persons, of all descriptions, who are employed through the week, and cannot obtain education otherwise: they are thirty-eight in number; are supported by voluntary contributions; and are said to be attended by about 1400 young persons. In consequence of the great admixture of people from the West-Highlands, two of these schools are appropriated to the teaching reading of the Gælic language. But, however well disposed the owners of manufacturing establishments may be, and however liberal and humane the conduct of the directors of Sunday schools, still it is to be feared, that neither the schools established at factories, nor the Sunday schools in great towns, are sufficient to remedy the defects arising from the neglect of early education. The long attendance in work rooms unfits the pupil for benefiting by the lessons of the teacher:

the same remark will apply to the Sunday schools: and there is reason to fear that young persons will consider attendance on that day as a continuation of labour and confinement, nor can they be expected to apply their minds so diligently as to obtain much advantage from those well intended institutions. Besides, Sunday schools are adapted to benefit those only who have previously obtained some instruction in reading: they may improve such, or prevent their losing what they have actually acquired, but cannot be a complete substitute for the regular schools in which the first elements are to be learned. Nor ought the precious blessings of health to be deemed unworthy of attention on a day which serves as a "pause from toil;" when the mind might be cheared, the spirits revived, and the constitution, injured by close confinement at no very healthy employment, might be in some measure recruited, by the breathing of free and wholesome air in the open fields. That poor children, whose gratifications are so limited, should be excluded from this enjoyment, will, to every feeling mind, be a a matter of regret. If children are to be taught, early instruction at school, before they are sent to a manufactory to gain their subsistence, must be resorted to. If this has been neglected, which indeed is too often the case, then probably *daily* tuition in the school of the mill or factory, at an early hour in the morning, before the thoughts are dissipated with the busy scene, or the spirits exhausted with the day's labour, will most effectually ensure progress in education. The slight suggestions now offered are merely submitted to the consideration of those who

have, with much humanity, directed their attention to this interesting subject.

Friendly Societies.—For a long period, numerous societies formed by the working classes for the relief of their own members, have subsisted in this county: they have been attended with beneficial effects, and their number is increasing, probably in consequence of being recognized and protected by the legislature. Of these *benefit societies*, or *box clubs*, there may probably be about sixty in the county, and about forty of these are established at Paisley and the suburbs. They have been wisely and benevolently instituted by the labouring part of the community, as a mutual insurance against poverty. Persons in the same condition, or from the same part of the country, or residing in the same village, are associated together, and by monthly or weekly payments, amounting to about 6*s.* or 8*s.* in the year, create a fund or revenue out of which the diseased and the aged are relieved, as matter of right, not of charity. The favourable tendency and good effects of such associations are, security against improvidence, preserving the parochial funds for absolute paupers, and lowering the rate of assessment for the poor. This last effect has been experienced in the parish of Govan in the neighbouring county of Lanark, where the poor, partly from the establishment of friendly societies, are less numerous, and supported at a lower rate than in any other parish of the same population. Their beneficial effects in the town and suburbs of Paisley are also very considerable, as may be easily

gathered from examining the amount distributed to indigent members of the societies established in that district: from accurate accounts of thirty-five of the Journeymen and Friendly societies, it appears, that the sums expended by them for the relief of their members, in the five following years, were;

	£.	s.	d.
1805,.....	1093	19	3
1806,.....	954	8	10
1807,.....	952	5	0½
1808,.....	977	10	1
1809,.....	961	9	0½
Sum,	4939	12	3
Yearly average,	987	18	5½

It is supposed that other societies in Paisley and the neighbourhood distribute £600 per annum; and that there may be, at least, £1000 yearly expended by similar associations in other parts of the county; of course, there is an annual fund of £2500, raised among the working classes in Renfrewshire for the support of their own members.

The management of these societies is judicious and frugal. If any of their members are disabled or sick, they are visited by a surgeon and some of the society. If the patient is confined to bed, they order the highest provision that their regulations allow, which is commonly about 5*s.* per week: if he is not confined to bed, a lower provision is ordered, ac-

cording to the nature of the case; in general about one half of the sick-bed allowance. Those who incline may become members of more than one society; and in old age, or when in distress, they receive the stipulated allowance from each; so that a person in health, who spares a little money for the funds of such societies, may obtain some support, when he is no longer able to provide for himself or family In some of the Agricultural surveys of English counties, the scheme of levying from the young and healthy, a small sum to be put out upon accumulated interest for the advantage of the aged and infirm, is highly approved of as a mean of correcting the great evil of increased poors rate: and it is very properly called *taxing labour to support itself.* "Age and infirmity would then dip its hand into the purse it "had helped to fill; honest pride would be preserved, industry encouraged, and the latter part of a "poor man's life would terminate in comfort."[a]

From what has been stated it appears, that the parochial assessments in this county, collections at places of public worship, annual subscriptions for infirmaries, and distributions by friendly societies, when brought into one sum, are probably not less than £14000 per annum. The several institutions now mentioned do not supersede the necessity of numerous private charities, nor associations of individuals for benevolent purposes. To detail these is impossible and unnecessary: it is enough to observe, that in no part of the kingdom do the claims of the indi-

a Kent's Survey of Norfolk, p. 174.

gent and distressed meet with more sympathy and charitable relief than in Renfrewshire. A recent institution in Paisley, for affording aid to indigent females, conducted by respectable persons of their own sex, for which about £600 have been collected in five months, affords one among many instances of the charitable disposition of all ranks.

The only other remark which occurs regarding the poor is, that it would be matter of good police to limit the number of houses for retailing spirituous liquors. The licences issued for this purpose are 686, and in some years they have exceeded 700; when to the legal dealers are added some hundreds who carry on the sale of spirits in an illicit manner, the danger to which thoughtless persons are exposed is obvious; and it is to be feared that from this circumstance many may have not only been involved in poverty but even tempted to crimes.

In answer to the inquiries of the board of agriculture concerning houses of correction; it may be observed, that in a populous county like Renfrewshire, probably many petty crimes and misdemeanours might be checked, were such houses erected in proper situations. No Bridewell exists as yet, but at Greenock. The bill for regulating the police of Paisley makes provision for one at that town; but, while the other provisions of the bill were, to the great benefit of the town of Paisley, immediately followed out, no effectual steps have been taken to carry into execution this part of it, in which all the populous adjoining parishes have a deep concern.

SECTION IX.—POPULATION.

The population of Scotland has been accurately ascertained at four different periods, viz. by Dr Webster in 1753-5; by the ministers of the different parishes when the Statistical volumes were published in 1791-7; by the population bill brought into parliament by Mr Abbot, now speaker of the House of Commons, in 1801; and by a similar act in 1811. The results of these enumerations of the inhabitants of North Britain, without taking into view persons serving in the navy and army, were;

1753-5,	1,265,380.		
1791-7,	1,526,492.	Increase in 40 years,	261,112
1801,	1,599,068.	Increase in 7 years,	72,576
1811,[a]	1,804,864.	Increase in 10 years,	205,796
		Total increase in 57 years,	539,484

Since the year 1755, every county in Scotland has advanced in population, excepting the county of Elgin. The great increase has been in the counties of Edinburgh and Lanark, and the neighbouring commercial and manufacturing districts. In the county of Edinburgh, the rate of increase since that period, is in the proportion of 5 to 3; in

a See table of population of the different counties in the appendix.

Lanarkshire, as 7 to 3; and in Renfrewshire, as 7 to 2; the population of this shire at different periods being as follows;

1695,	3960 families.		
1753-5,	26,645 persons.		
1791-7,	62,853	Increase in 40 years,	36,208
1801,	78,056	Increase in 7 years,	15,203
1811,	92,596	Increase in 10 years,	14,540
		Total increase in 57 years,	65,951

When the seamen employed in registered vessels, who, as already mentioned, amount to 4983, and the men belonging to this county now serving in the army, navy and militia, are added to the enumeration of the inhabitants taken in 1811, the total population is considerably above 100,000, so that it may be fairly computed that the inhabitants of Renfrewshire have *quadrupled* in the last 57 years, a circumstance unexampled in any county in Scotland.

The rise and progress of the most considerable towns and villages of this county having been already mentioned, it may now be proper to give a statement of their population as it stood in 1811, and which is as follows:

Paisley town and suburbs,	29,541
Greenock,	17,581
Port-Glasgow,	5,042
Johnstone,	3,647
Pollockshaws,	3,084
Lochwinnoch,	1,907
Kilbarchan,	1,898
Renfrew,	1,637
Barrhead and Newton-Ralston,	1,230
Thornly Bank,	1,073
Eaglesham,	943
Neilston,	683
Linwood,	552
Houstoun,	524
Gourock,	500
Grahamstown in the parish of Neilston,	448
Daff or Innerkip,	430
Gateside and Chappel in the parish of Neilston,	394
Crofthead in do.	327
West Arthurlee, in do.	305
Kilmalcolm,	291
Newton in the parish of Mearns,	280
Total inhabiting towns and villages,	72,317

And this sum, deducted from 92,596, the whole population of the county, leaves 20,279, the number of persons living in the country.

From a careful perusal of the Statistical volumes, published in 1791-7, it appears that the number of inhabitants in each parish, and their ages, were then as follow;

Population table for 1791-7.

	Males.	Females.	Ages.					Total.
			Under 15.	From 15 to 20.	From 20 to 50	From 50 to 70	Above 70.	
Cathcart,.....	370	327	247	82	237	117	14	697
Eaglesham,....	492	508	376	94	378	133	19	1,000
Eastwood,.....	1,349	1,293	1,041	327	985	242	47	2,642
Erskine,.....	402	406	306	75	320	88	19	808
Greenock,.....	7,467	7,533	5,730	1309	5,909	1795	257	15,000
Houstoun,.....	510	524	361	124	391	128	30	1,034
Inchinnan,.....	150	156	115	29	115	41	6	306
Innerkip,.....	640	640	448	150	345	287	50	1,280
Kilbarchan,....	1,202	1,304	942	211	978	334	41	2,506
Kilmalcolm,...	443	508	357	90	359	127	18	951
Lochwinnoch,	1,289	1,324	982	246	988	347	50	2,613
Mearns,.....	675	755	562	113	542	186	27	1,430
Neilston,.....	1,187	1,143	908	190	888	294	50	2,330
Paisley,.....	6,577	7,223	5,129	1390	5,240	1807	234	13,800
Do Abbey,....	5,259	5,533	4,197	911	4 107	1437	140	10,792
Port-Glasgow,	1,917	2,119	1,517	380	1,525	537	77	4,036
Renfrew,.....	800	828	538	135	716	162	77	1,628
	30,729	32,124	23,756	5856	24,023	8062	1156	62,853

The population of each parish as taken under the acts of parliament in 1801 and 1811 was;

	1801.			1811.		
	Males.	Females	Total.	Males.	Females	Total.
Cathcart,.....	552	537	1,059	714	735	1,449
Eaglesham,.....	588	588	1,176	696	728	1,424
Eastwood,.....	1,652	1,723	3,375	2,241	2,604	4,845
Erskine,.....	419	428	847	483	480	963
Greenock,.....	8,196	9,262	17,458	7,978	11,064	19,042
Houstoun,.....	884	1,007	1,891	940	1,104	2,044
Inchinnan,.....	239	223	462	342	299	641
Innerkip,.....	635	732	1,367	718	914	1,632
Kilbarchan,.....	1,437	2,314	3,751	1,625	1,938	3,563
Kilmalcolm,.....	544	586	1,130	713	761	1,474
Lochwinnoch,..	1,371	1,584	2,955	1,618	1,896	3,514
Mearns,.....	756	958	1,714	860	1,081	1,941
Neilston,.....	1,702	2,094	3,796	2,205	2,744	4,949
Paisley,.....	7,821	9,205	17,026	8,843	11,094	19,937
Do. Abbey,.....	6,592	7,561	14,146	7,614	9,171	16,785
Port-Glasgow,	1,748	2,117	3,865	2,322	2,794	5,116
Renfrew,.....	962	1,069	2,031	1,076	1,229	2,305
	36,068	41,988	78,056	40,988	50,636	91,624

From these tables it appears, that, when the population lists were taken in 1791-7, in 1801 and in 1811, there was uniformly a great excess of females; and this disproportion between the sexes has evidently increased at each successive period. This may be illustrated by the following table, which may become still more interesting if compared with similar tables constructed for other places.

Table of the males and females in Renfrewshire at different periods, and the proportions to 1000 at each period.

	Real numbers.			Prop. to 1000.	
	Males.	Females.	Total	M les.	Females.
1791-7,.....	30,729	32,124	62,853	488	512
1801,.....	36,068	41,988	78,056	462	538
1811,.....	40,988	50,636	91,624	447	553

It may be here observed, that this great difference between the numbers of males and females, chiefly exists in great towns, and in parishes where manufacturing and commercial establishments are situated: but, in country parishes, where there are no manufactures and no towns or villages, the balance is kept even. Thus in the parishes of Erskine, Inchinnan and Kilmalcolm the numbers of males and females are nearly equal, the amount being;

	Males.	Females.	Total.
For 1801,.....	1202	1237	2439
And for 1811,.....	1538	1540	3078

It is not possible to obtain regular and accurate tables of the births, burials and marriages in Renfrewshire, because in most country parishes in Scotland, no distinct records of these are kept.[a] The proportion of *male and female births*, as appears from the Statistical account of parishes in Renfrewshire, is

a The circumstances which occasion defects in those records are explained in the Agricultural survey of Dumbartonshire, p. 292.

14 to 13,[a] being very nearly the same ratio as the result of the survey of ninety-nine parishes of Scotland in 1801 under the population act, where the number of male births was 2512, and of females 2309.

It has been already mentioned, that the demand for labour in this district has occasioned a great influx of strangers: a very few are from England; a great many from Ireland; and a still greater number from the Highlands of Scotland, particularly from Argyleshire. When the account of the population of Greenock was taken in 1791, there appears to have been in that town 1433 heads of families natives of Argyleshire, among whom the prevailing name was Campbell; and probably there was nearly the same number of Highlanders in Paisley. The numbers of natives of the Highlands of Scotland increased so rapidly in those towns, that it was found expedient, in each of them, to erect a chapel for public worship and religious instruction in the Gaelic language.

The food and mode of living having been already noticed, and the prices of provisions fully detailed:[b] it is not necessary to offer any farther remarks on these subjects.

With regard to the *healthiness of the district;* to what has been said upon this subject under the article climate,[c] it may be added, that, in consequence of the moist atmosphere, rheumatic complaints are common among persons in every condition of life: nervous

a See Statistical Account of Scotland, vol. xv. p. 72.
b See pages 160 and 172.
c See page 12.

fevers at times appear, but they are neither very general, nor uncommonly fatal: consumptive complaints are frequent. Instances of longevity, however, are well authenticated. Robert Semple of Beltrees, one of the first nomination of Justices of Peace for Scotland after the union, died in 1789, aged 108 years.[a] In 1739, there is said to have been living in the work-house of St Margaret's, Westminster, Margaret Patton, born in the parish of Lochwinnoch, aged 138 years.[b] And, when the Statistical account of the parish of Renfrew was published in 1791, there were, in a population of only 1628 souls, *seventy-seven* persons above 70 years of age, many of whom were above 80, and some above *ninety*.[c]

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a See Stat. Account, vol. xv. p. 452. and Sir John Sinclair on Health and Longevity.

b See Stat. Account, vol. xv. p. 72.

c See Stat. Account, vol. ii. p. 172.

CHAPTER XVI.

OBSTACLES TO IMPROVEMENT, AND REMEDIES.

IN the course of this report hints of many improvements have been given; and, probably, the mere mention of obstacles to farther improvements, and defects in present practices, may suggest the proper remedies: on these subjects, therefore, it will not be necessary to enlarge.

The obstacles to improvement enumerated and dwelt upon in the agricultural reports of other counties are, want of power to inclose, tithes, poors-rate, the laws of entail, bad roads, the mode of letting land, existing prejudices among landed proprietors regarding the size of farms, and degree of interest in the lands which the lease allows to the occupier. Such obstacles have either no existence in Renfrewshire, or their effects in retarding improvements have not been felt. In so far as concerns the public it is enough to refer to the reports in which such subjects are discussed.[a]

Real obstacles to improvement in this county, have arisen from deficiency of capital, from an unfavourable climate, and from want of disseminated

a See Agricultural surveys of Cheshire, East Lothian and Peebles.

knowledge: these are circumstances which may require consideration.

The first of these, *deficiency of capital*, is probably the greatest obstacle to agricultural improvement. Manufacturing and commercial pursuits have engaged most general attention in this district, and employed more than a due proportion of capital, which has been thus withheld from agriculture.

Extensive improvements in reclaiming wastes, trenching, draining, inclosing and manuring, cannot be accomplished without incurring very considerable expense; and, in general, the capital of farmers in this county, is inadequate for such operations, or for bringing their farms to the highest state of improvement. It is hoped, that the gradual increase of capital which has no doubt taken place, is now in some degree, remedying this evil; and the farmer, having full security for enjoying the fruits of his skill and industry, may be expected to employ that capital in accomplishing many beneficial improvements.

The *moisture of the climate* in this part of Scotland, occasions a more precarious seedtime and harvest than in other more genial situations. From this cause the labours of the husbandman are often retarded, and his expenses increased. Though an unfavourable climate does not admit of a remedy, yet its effects may be mitigated by the mode of managing and cultivating the soil. The farmer, instead of directing his attention to corn as the primary object, should turn his views to the improvement of his grass fields and pastures: those, in many cases, might be greatly meliorated by draining, by top-dressing, and by

saving them from the tread of cattle in wet weather, and particularly in winter. As the dairy is already an important object in this county, the directing the chief attention to the improvements of the pastures will not be felt as a change of the system of management, but merely as the prosecution of a plan already known to be beneficial. Fields rendered as dry as the plough and the spade can make them,—enriched with manure,—sown down with grass, and allowed to remain in pasture, and saved from the poaching and treading of cattle, will prove far more productive. The rich herbage which such fields will afford while in pasture, and the weighty and abundant crops of grain which may be obtained from them when occasionally thrown into tillage, will compensate for this more limited cultivation by the plough. Early plowing and sowing, hand-weeding, hand-hoeing and horse-hoeing, are all necessary precautions in this climate. When corns are kept clean they suffer far less, in a bad harvest, than crops infested with grass and weeds, which are often, in our moist atmosphere, with great difficulty saved from rotting.

The want of *disseminated knowledge* has been stated as an obstacle to improvement, and it certainly retards the progress of husbandry in this part of Scotland: for, it must be confessed, that the education of many of the farmers in this district, is not so perfect as might be expected, considering the important situation they hold in the community. Few of them are readers of agricultural publications;—there are no cheap publications on rural affairs circulated;—

nor are there any agricultural libraries. Forty years ago, a learned and intelligent gentleman who has been already alluded to,[a] published and circulated some small tracts on the management of hay and corn harvest, with some hints on spring labour; and there is no doubt that his publications awakened the attention of the farmer to new plans for overcoming the difficulties which occur in a bad season, plans which experience has since approved. But agriculture in this district, although deriving benefit from those valuable and important hints, has advanced chiefly from the farmer profiting by the example of those around him, and from accommodating the successful plans of others to his own particular situation, incited by just views of private interest.—The dissemination of cheap and useful publications might certainly produce good effects.

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a The Rev. John Warner, minister of Kilbarchan.

CHAPTER XVII.

MISCELLANEOUS OBSERVATIONS.

SECTION I.—AGRICULTURAL SOCIETIES.

THERE are no societies in this county instituted for the purpose of discussing agricultural subjects. The Kilbarchan farmers' society, established more than forty years ago, was intended for charitable purposes; and to that society the minister of the parish addressed some of the short essays on agricultural subjects, alluded to in the preceding page. Those essays contained most useful hints and observations suited to the climate, and to the customs of the persons to whom they were addressed. In the course of those little tracts, the enlightened and benevolent author recommends to the society the "canvassing and examining" subjects of farming, recording beneficial practices, and employing part of their funds in encouraging persons who had successfully exerted their ingenuity, prudence and activity, in the affairs of husbandry. Those funds, he observes, would not be misapplied, were some part of them allotted annually to encourage ingenuity and experiment, and to propagate the knowledge requisite to farming. By these means, misfortunes which arise from ignorance, and mis-

management might be guarded against, and farmers enabled, by their skill and activity, to secure their future independance and ease. It is probable this society was productive of considerable advantage in discovering or diffusing the knowledge of useful practices in husbandry; but for many years it has been merely a society for charitable purposes.

In Erskine, Inchinnan and some of the adjoining parishes, a number of farmers have associated and formed a club for improving the breed of cattle, and promoting good ploughing, by bestowing premiums on the successful competitors at shews of cattle and ploughing matches. This is a most useful institution; it has been attended with beneficial effects, and is highly deserving of countenance and encouragement. The ploughing matches have excited farmers and their servants to improve their horses and their implements, and to perform their work with care and accuracy.

SECTION II.—PROVINCIAL TERMS.

The Scots dialect, as spoken in this county, is in every respect similar to the dialect in Ayrshire, Dumbartonshire and Lanarkshire; with this difference, that the Gaelic accent, in consequence of a great admixture of the natives of the Western Highlands, is very prevalent, particularly in the town of Greenock. Dr Young, in the Statistical account of the parish of Erskine, which is situated near the centre of this

county, and which may be considered as affording a specimen of the language of this district, has accurately stated its peculiarities in the following words:

"The western dialect of the Scots language, is "perhaps no where spoken in greater purity than in "this and the adjoining parishes. The most striking "peculiarity of that dialect is, a disposition to shorten "the penult and prolong the last syllable of words, "when the structure of them admits of that being "done. The vowel which is expressed in the penult "syllable, is, for the most part, the obscure imperfect "sound which the English give to the character *e* "when between two consonants; and the lengthened "vowel of the last syllable is, very often, the English "sound of *a* in the word *part*. The penult is pro-"nounced with the acute accent, or rising inflection "of the voice, and the last syllable with the invert-"ed, or falling and rising circumflex. The intervals "between the extremes of gravity and acuteness of "tone, are often considerable."

The names of many places and of several streams seem to be of Celtic origin; such as Calder, *Alt*-Patrick, Gourock, Gleniffer, Craigenfeoch, Auchenames, Auchencloich, Auchenbathie, Inchinnan, Bar, &c. A great number of names are English compounds, as Neilstoun, Newton, Longtown, Craigton, Long-haugh, &c. We recognize the residence, or burial place, of some of our Scotish saints in the names Kilbarchan, Kilmalcolm, Killallan: and perhaps a vestige of the ancient British language in Cardonald, the name of an old family seat of the Stewarts, in the parish of Paisley, now the property of Lord Blantyre.

As it is well known that ancient proprietors assumed sirnames from their land; we have, of course, in this county the sirnames of Houstoun, Caldwell, Ralston, Pollock, Porterfield, &c. The lands of Erskine, Whiteford, and perhaps some others, gave names to respectable families, who now, however, have no property in this county.

CONCLUSION.

From what has been said in this report, it will have appeared, that the prosperity of the county of Renfrew has been rapidly advancing. "Industry is, at "all times, a pleasing spectacle. What more de-"lightful than to see our provinces covered with "corn, and our ports crowded with vessels? What "more admirable than the products of human ingenu-"ity; magnificent buildings, plentiful markets, im-"mense cities?" [a] The county now surveyed exhibits a specimen of the effects of the exertions of art and industry which must be gratifying to every reader: and we have good ground to indulge the expectation that future enquirers will have it in their power to record many farther important improvements, which the enlightened views of its inhabitants may prosecute and accomplish.

It is presumed it will be agreeable to the reader to see the various particulars detailed at length in the preceding pages, brought into one view in the following table:

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a Enquirer.

APPENDIX.

TABLE I.

CONTAINING A GENERAL VIEW OF THE COUNTY OF RENFREW.

EXTENT in square miles,.....	241
——— in English acres,.....	154,182
——— in Scots acres,.....	122,646
Horses, see note (*a*).....	2,234
Cattle, young and old, about (*a*).....	10,000
Sheep, about (*a*).....	10,000
Value of live stock, about (*a*).....	£185,000
Valued rent, Scots,.....	£69,172 1
Real rent in 1795, exclusive of houses, Ster.....	£67,000
Real rent in 1811, exclusive of houses, Ster	£126,000
Proprietors from £100 to £6232 Scots of valued rent,.....	81
Proprietors from £10 to £100 Scots,.....	269
Small do. or feuars under £10 Scots,.....	100
Inhabitants in 1755,.....	26,645
——— in 1791-5,.....	62,245
——— in 1801,.....	78,056

Inhabitants in 1811,.....	91,624	
Number of seamen in 1811,.....	4,983	
	———	96,607
Increase from 1755 to 1811, being 56 years,		69,962
Inhabiting towns and villages,.....	73,317	
——— the country	19,307	
Seamen,.....	4,983	
	———	96,607
Inhabitants in 1811 to every square mile, (*b*)		400⅔
English acres to each inhabitant, (*b*).....		1⅔
Public revenue from customs, excise, &c. yearly, (*c*).....		£1,250,000
Revenues from turnpike roads, (*d*).....		£16,000
Sums borrowed for roads and bridges,		£110,000
Sums expended on docks and harbours, inland-navigations, new roads and bridges during the last five years, (*e*).....		£215,000
Yearly revenue from docks and harbours of Greenock and Port-Glasgow,.....	£6,731 3 6	

	Ships.	Tons.
Registered ships and vessels belonging to Greenock and Port-Glasgow,	538	67,859
Vessels arriving at Glasgow, Greenock and Port-Glasgow, in one year,	3308	226,837

Value of imports of grain into Clyde yearly, (*f*).....	£397,000
Cotton wool imported in one year,	℔10,482,541
Duties collected from that article,	£105,450 14 1
Number of mills for cotton spinning,.....	41
Present value of cotton yarn annually spun, (*f*).....	£630,000

Number of looms,				7,500
Number of bleachfields,				66
Ministers' stipends,	£6361	13	10	
Average to each minister yearly,	£289	3	4½	
Enrolled poor,				1,580
Capital stock of poors funds,	£2951	0	0	
Annual income of the poor,	£7895	8	2	
Average to each,	£4	19	11	
Sums annually distributed to the poor and bestowed on Infirmaries, Hospitals and Charitable institutions,				£14,000
Scholars at public and private schools in great towns, and at private schools in country parishes, (*g*)	7,000			
Scholars at parochial schools in the country, (*g*)	740			
				7740
Salaries of schoolmasters of these parochial schools, (*g*)	£266	4	5⅓	
Their other emoluments, (*g*)	£440	0	0	
Average income of each parish schoolmaster,	£54	4	7	

OBSERVATIONS ON THE PRECEDING STATISTICAL TABLE.

The foregoing table has been constructed from the various facts detailed in this report, and though great attention has been bestowed upon it, still there may be defects which it is almost impossible to remedy. The following remarks are to be attended to:

(*a*) The live stock in the county of Renfrew is not precisely known, nor can its value be easily ascertained. The number of horses is taken from the account of assessed taxes, but it is probable that it is considerably below the truth. The number of cattle and of sheep not having been given in the Statistical accounts of the county, *even* sums are here put down.

(*b*) In calculating the number of inhabitants to every square mile, and the number of acres to each inhabitant, the seamen belonging to this county are taken into account. The result is, that the degree of population in the counties of *Renfrew and Edinburgh is nearly equal;* and these are the counties of Scotland by far the most populous in proportion to their extent. The calculation does not proceed on the supposition that the whole is to be confined to the lands in cultivation, which would have given a far higher result, but is applied to the whole of the county, including extensive uninhabited tracts.

(*c*) The public revenue collected within the county, has been stated in this report at £1,162,301. To

this there may be added the sum arising from the distribution of stamps, and a farther militia assessment of one shilling in the pound on assessed taxes; so that the total revenue may be stated at near one million and a quarter per annum.

(*d*) The yearly revenues from toll bars have been stated in this report at £10,300, but for the year commencing May 1812 there has been a considerable increase of revenue on the different roads. The toll on Inchinnan bridge has been let at £1215; and, as there is now (1812) the prospect that the exemption in favour of mail coaches will be discontinued, the amount of tolls may be estimated at £16,000.

(*e*) The sums expended on new roads and other public works in Renfrewshire during the last five years, are;

Paisley canal,.....	£90,000
Docks and harbour of Greenock,.....	£50,000
Do. do. of Port-Glasgow,.....	£10,000
Inchinnan bridge,.....	£18,000
Loch-Libo road from Glasgow to Irvine,	£15,000
Roads from Greenock to Kelly-bridge,...	£12,000
Improvements on other roads,.....	£10,000
Deepening the river Clyde,.....	£10,000
	£215,000

(*f*) The total value of the *imports* of the county, of its *manufactured* produce and of its *agricultural* produce, it is not easy to ascertain. The value of the

grain imported may be accurately determined. The present value of cotton yarn spun at the mills in this shire has been calculated from communications made by the gentlemen concerned in that manufacture. The results are given in the table. But the amount in money, of the various products of manufactures so diversified and extended, and of a commerce of such magnitude, is almost impossible to be determined with any degree of precision.

(*g*) The *public*, or *established schools* in great towns have been mentioned in this report. It must be observed that, not only in the great towns, but in almost every country parish, there are many schools besides the established or parochial school, and that the probable number of scholars may be 7000. The particulars regarding the parochial schools in country parishes are as follow:

Number of scholars and emolument [a] of parish schoolmasters, in the year 1812.

Parishes.	No. of scholars.	Schoolmaster's salary.			Total yearly emoluments.		
		£.	s.	d.	£.	s.	d.
Cathcart,.....	60	20	0	0	56	0	0
Eaglesham.....	75	19	0	0	64	0	0
Eastwood, ...	70	18	0	0	60	0	0
Erskine,.....	65	22	4	5⅓	62	0	0
Houstoun,.....	40	22	4	5⅓	46	0	0
Inchinnan,.....	40	16	13	4	40	0	0
Innerkip,.....	35	5	11	1⅓	26	0	0
Kilbarchan,...	80	22	4	5⅓	70	0	0
Kilmalcolm,...	40	22	4	5⅓	46	0	0
Lochwinnoch,	55	22	4	5⅓	53	0	0
Mearns,.....	30	16	13	4	34	0	0
Neilston,.....	70	22	4	5⅓	64	0	0
Renfrew,.....	80	37	0	0	85	0	0
	740	266	4	5⅓	706	0	0

The following table shews the population of the counties of Scotland at four different periods, and the area in square miles, with the number of inhabitants for each square mile in 1811; and from it the reader will be enabled to compare the progressive rises in the population of each county.

a The emoluments arise from fees paid by the scholars.

Table of the area and population of Scotland.

COUNTIES.	Square miles.	POPULATION.				Inhab. on each mile in 1811.
		1755.	1791-5.	1801.	1811.	
Aberdeen,..... ..	1,950	116,836	122,921	123,082	136,903	$70\frac{1}{5}$
Ayr,.....	1,042	59,009	75,035	84,306	103,934	$99\frac{1}{10}$
Argyle,.....	3,800	63,291	76,101	71,859	85,585	$22\frac{1}{2}$
Banf,.....	660	36,521	38,487	35,807	34,100	$51\frac{1}{5}$
Berwick,.....	476	24,946	30,875	30,621	30,779	64
Bute,.....	162	7,125	11,072	11,791	12,033	$74\frac{1}{5}$
Caithness,.....	690	22,215	24,802	22,609	23,419	$33\frac{9}{10}$
Clackmannan,.....	48	9,003	8,749	10,858	12,010	$250\frac{1}{5}$
Dumfries, ...	1,016	41,913	52,329	54,597	62,960	$61\frac{9}{10}$
Dunbarton,.....	230	13,857	18,408	20,710	24,189	$105\frac{1}{10}$
Edinburgh,.....	364	90,412	122,655	122,954	148,444	$407\frac{4}{5}$
Elgin,.....	507	28,934	26,080	26,705	28,108	$55\frac{3}{5}$
Fife,.....	491	81,570	87,250	93,743	101,272	$206\frac{1}{5}$
Forfar,.....	880	68,297	91,001	99,127	107,264	$121\frac{4}{5}$
Haddington,.....	297	29,709	28,966	29,986	31,164	$104\frac{9}{10}$

Inverness,.....	4,183	64,656	73,979	74,292	78,415	$18\frac{7}{10}$
Kincardine,.....	380	24,346	26,799	26,349	27,439	$72\frac{1}{5}$
Kinross..... .	79	4,889	5,302	6,725	7,245	$91\frac{7}{10}$
Kirkcudbright,.....	$882\frac{1}{2}$	21,205	26,959	29,211	33,634	$38\frac{1}{10}$
Lanark,.....	870	81,726	125,254	146,699	191,752	$220\frac{2}{5}$
Linlithgow,.....	125	16,829	17,570	17,844	19,451	$155\frac{3}{5}$
Nairn,.....	202	5,694	6,054	8,257	8,251	$40\frac{4}{5}$
Orkney and Shetland,	1,320	38,591	43,239	46,824	46,153	$34\frac{9}{10}$
Peebles, ...	360	8,908	8,107	8,735	9,935	$27\frac{1}{2}$
Perth,.....	2,494	118,903	133,274	126,366	135,093	$54\frac{1}{10}$
Renfrew,.....	241	26,645	62,853	78,056	92,596	$400\frac{8}{9}$
Ross and Cromarty,..	2,490	47,656	55,430	55,340	60,853	$24\frac{2}{5}$
Roxburgh,.....	672	31,273	32,020	33,682	37,230	$55\frac{2}{5}$
Selkirk,.....	257	4,368	4,314	5,070	5,889	$22\frac{9}{10}$
Stirling,.....	645	38,813	46,663	50,825	58,174	$90\frac{7}{10}$
Sutherland,.....	1,820	20,774	22,961	23,117	23,629	$12\frac{9}{10}$
Wigton,.....	$485\frac{1}{2}$	16,466	20,983	22,918	26,891	$55\frac{3}{10}$
	30,119	1,265,380	1,526,492	1,599,068	1,804,864	

A similar table given by Mr Chalmers in his Caledonia, vol. ii. differs in some instances from the above; this chiefly arises from the present table being brought down to 1811.

NOBLEMEN, FREEHOLDERS, COMMISSIONERS OF SUPPLY, AND JUSTICES OF PEACE OF RENFREWSHIRE.

Those who have *superiority only*, are marked in Italics; Commissioners of Supply, named in the act 1808, are marked Com.r; and Justices of Peace, J P.

Noblemen.

Marquis of Abercorn.
Earl of Eglinton.
Earl of Glasgow.
Lord Viscount Cathcart.
Lord Blantyre.
Lord Belhaven.
Lord Douglas.

Their eldest sons are named in the act 1808 *as Commissioners of Supply, and are;*

The Right Honourable James Lord Paisley.
The Right Honourable Lord Montgomerie.
The Right Honourable Lord Boyle.

The Honourable William Shaw Cathcart.
The Honourable Robert Hamilton.
The Honourable Archibald Douglas.

Freeholders.

Sir J. Shaw Stewart of Greenock, Bart. Com.r J. P.
John Crawford of Auchenames, J. P.
George Houstoun of Johnstone, Com.r J. P.
Malcolm Fleming of Barrochan, Com.r J. P.
Gavin Ralston of Ralston, Com.r J. P.
Thomas Brisbane of Brisbane, Com.r
Peter Murdoch, Merchant Glasgow.
David Stewart, W. S.
James Dunlop of Househill, Com.r J. P.
William Mure of Caldwell, Com.r J. P.
William Maxwell of Bradieland, Com.r J. P.
Archibald Speirs of Elderslie, Com.r J. P.
Peter Speirs of Culcreuch, Com.r
John How of Damtown, J. P.
Duncan Darroch of Gourock, Com.r J. P.
Boyd Alexander of Southbar, Com.r J. P.
James Mure, Counsellor at Law.
John Boyes of Wellhall.
Sir J. Maxwell of Nether Pollok, Bart. Com.r J. P.
William Blair of Blair, Com.r J. P.
James Hamilton of Holmhead, Com.r J. P.
Robert Fulton of Hartfield, Com.r J. P.
H.ble Arch.d Campbell younger of Succoth, Com.r J. P.
John Cunningham of Craigends, Com.r J. P.
George Brown of Capelrig, fiar (Com.r J. P.) in absence of Gavin Ralston the Life-renter.

Alexander Porterfield of Porterfield, Com.r J. P.
Archibald Campbell of Blythswood, J. P.
John Mair, Merchant in Glasgow, Com.r J. P.
John Maxwell of Dargeval, Com.r J. P.
James Gemmill, Merchant in Greenock, Com.r J. P.
George Oswald of Auchincruive, Com.r J. P.
Arch.d Campbell, Merch.t in Greenock, Com.r J. P.
James Lownds of Arthurlee, Com.r J. P.
Archibald Buchanan of Hillington, Com.r J. P.
William C. C. Grahame of Gartmore, Com.r J. P.
Dr John Colquhoun of Torrs, Com.r J. P.
The Honourable Archibald Douglas.
William M'Iver, Merchant, Liverpool, Com.r
Archibald Smith of Jordanhill, Com.r
James Smith younger of Jordanhill, Com.r
Lodovic Houston younger of Johnstone, Com.r J. P.
Robert Wallace of Kelly, Com.r J. P.
James Maxwell Wallace, Advocate.
George Yuill, Merchant in Glasgow.
Walter Logan, Merchant in Glasgow, Com.r J. P.
James Murdoch, Merchant in Glasgow.
Col. Thomas Brisbane younger of Brisbane, Com.r
Robert Stewart, Writer Greenock.
Sir J. S. Heron Maxwell, Bart.
Claud Neilson of Ardardan.
James Buchanan of Northbar, Com.r J. P.
Dr James Jeffray, Professor of Anatomy, Glasgow.
Michael Nicolson of Carnock, J. P.
Michael Stewart of Carnock, J. P.
Lord Archibald Hamilton.
George James Campbell of Treesbank.
William Patrick, W. S.

David Cathcart, Advocate.
Joseph Stainton of Biggarsfield.
Andrew Wilson at Deanside.
William Napier of Blackstoun.
Claud Alexander of Ballochmyle.
William Bell, Merchant in Glasgow, Com.r
R. A. Oswald of Auchincruive.
James Bogle, Merchant in Glasgow.
John Cunninghame, Advocate.
William Handyside, W. S.
Laurence M'Dowall, youngest son of William M'Dowall of Castlesemple, Com.r
Captain R. Cathcart of the Royal Navy.
James Buchanan, Jun. Merchant, Glasgow.
William Wilson, Writer, Glasgow.
Number on the Roll July 1812, 71.

Commmissioners of Supply, named in the act 1808, *besides those included in the foregoing list.*

John Maxwell younger of Pollock.
John Airston of Greenhill, J. P.
James Blair of Rashiefield.
William Brodie of Norvalston.
Robert Blair of Ladymuir.
Charles Cunningham of Carncurran, J. P.
William Cochran of Ladyland, J. P.
John Craig of Kirkton, J. P.
Patrick Cochran of Clippens.
William Caldwell of Gavin.
William Fleming younger of Barrochan, J. P.
Robert Fulton younger of Hartfield, J. P.

William Fulton of Park, J. P.
Henry Fulton younger of Park, J. P.
Alexander Graham of Fereneeze, J. P.
Alexander Graham of Craigbait.
Hugh Hutcheson of Southfield.
Richard Henderson of Middleton.
——— Hamilton of Garvocks.
Michael Hyndman of Lunderston.
Arthur Herbertson of Shaw.
John Hamilton of Rogerton.
John Howie of Hazelton and Crofthead.
James Kibble of Whiteford, J. P.
William Killoch of Freeland.
William Lownds younger of Arthurlee, J. P.
William Mure younger of Caldwell, J. P.
Ja.s Maxwell younger of Bradieland & Merksworth.
William M'Dowall of Castlesemple, J. P.
John Mair younger of Plantation.
William M'Dowall in Greenock, J. P.
James M'Night of Crawfordsburn.
Robert M'Fie of Langhouse.
——— M'Fie younger of Langhouse.
Thomas Pollock of Fawside, J. P.
Allan Pollock younger of Fawside.
Alexander Speirs, Merchant in Kilbarchan, J. P.
Moses Steven of Polmadie.
Robert Thompson of Camphill.
Robert Wilson of Bowfield,
John Wilson of Thornly, J. P.

Justices of the Peace, besides those in the foregoing lists.

Andrew Anderson, Greenock.
James Anderson, Greenock.
James Adam of Burnfoot.
Thomas Bissland, Greenock.
Herbert Buchanan of Arden.
Robert Barclay, Paisley.
Humphry Barbour, Kilbarchan.
William Clark, Johnstone.
John Crawford, Merchant, Port-Glasgow.
John Cunningham, Merchant, Port-Glasgow.
Alexander Dunlop, Greenock.
Patrick Dougald, Port-Glasgow.
Archibald Falconer, Port-Glasgow.
Thomas M'Night of Ratho and Cartsburn.
William M'Kerrel of Hillhouse.
William Napier of Milliken.
John Orr, Paisley.
John Pollock in Maxwelltown.
Robert Pollock of Walton.
Robert Houstoun Rae of Little Govan.
James Robertson, Greenock.
Stephen Rowan, Port-Glasgow.
William Stewart, Paisley.
John Smith Wilson of Broom.
Nathan Wilson, Greenock.

Justices of Peace ex officio.

The Sheriff Depute of the County.
The Sheriff Substitute.
The Provost and two Baillies of Renfrew.
The three Baillies of Paisley.
The two Baillies of Greenock.
The two Baillies of Port-Glasgow.
The Baron Baillie of Greenock.

Note A, see page 4th.

Mr Chalmers has communicated, that, the only compensations in Renfrewshire, which were adjudged under the Jurisdiction act, were the following;

1st, To William, Duke of Montrose, for the heritable Jurisdiction of the regality of Darnly, £800 sterling.

2d, To Alexander, Earl of Eglinton, heritable Sheriff of the shire of Renfrew, and heritable Baillie of the regality of Paisley, £5000 sterling.

APPENDIX II.

SINCE printing the preceding sheets, the author has been favoured with a particular account of the circumstances which led to the introduction of the important manufacture of silk gauze into Paisley. He is anxious that it should have a place in this work. He conceives it a public duty to preserve the names of persons who have deserved well of their country; and few manufactures have been attended with more beneficial effects than that of the silk gauze.

It was in the year 1759 that the late Mr Humphry Fulton, then carrying on the lawn manufacture at Maxwelltown near Paisley, having occasion to go to Edinburgh to settle accounts with the late Mr Daniel Seton and other customers there, Mr Seton observed to him, that, the silk gauzes manufactured in Spittalfields were getting into such general fashion that it was probable the demand for lawns and thread gauze would be greatly diminished, and the manufactures of Paisley, of course, materially injured. Producing at the same time a box of silk gauzes which he had just received from London, Mr Fulton bought one yard of plain, and three yards of figured gauze of different patterns, and expressed his hopes to Mr Seton, that he should be able, in a few months, to supply him with silk gauze wrought in Paisley.

Having on his return to Paisley ordered 10lbs of silk from London, he received the invoice, with a let-

ter to the following effect from his agent, in course of post: "I have sent you the silk ordered; but to "attempt the manufacture of silk gauze at Paisley will "be throwing away your money: it is so completely "established in Spittalfields it never can be removed."

Mr Fulton communicated his intention to his son-in-law (the late John M'Kerrell Esq. of Hillhouse, then a considerable manufacturer at Maxwelltown,) and offered him one half of the silk, if he should choose to attempt the weaving of silk gauze. Mr M'Kerrell was willing to try it; and, having found a weaver who could set about it immediately, he produced the first piece of gauze wrought at Paisley. But the price charged for working being such as to cost about 10*d.* per yard above what it could be sold for, he concluded that the manufacture never could succeed at Paisley, and he returned Mr Fulton what remained of the silk. Mr Fulton's first attempt was not more successful; but he was not discouraged. Thinking that a figured gauze might be sold at a higher rate in proportion to the work than a plain fabric, his next web was figured; and that he sold without any loss.

He had now so little doubt of his success, that his next order to London was for a bale of silk of 160lbs, at 40*s.* per lb; and upon receiving it he immediately increased the number of his looms. The other manufacturers were anxiously looking on; but Mr Fulton had near twenty looms at work before any of them thought of attempting the manufacture. They knew his character too well to suppose that he would persist in manufacturing at a loss. They

ventured to set their looms at work upon silk: the ingenious *Operatives* of Paisley soon acquired so much facility in producing the elegant new fabric, that they could afford their work at a considerably reduced rate; and the manufacturers were enabled to sell their goods in London, at a price much below what was demanded for the gauzes of Spittalfields. This circumstance led many English houses in that business to drop the manufacture at Spittalfields, and several to establish themselves at Paisley.

The manufacture which Mr Fulton had thus the merit of introducing at Paisley, he lived to see become so extensive, that the sales of his House, it is believed, were for many years above £80,000 yearly.

To the same gentleman Paisley was indebted for the introduction of the Ribbon manufacture. At a time when the gauze trade was in a very languishing state, and many persons out of employ, he brought, at a very considerable expense, two families from Coventry, the seat of the ribbon manufactory, and one from Spittalfields acquainted with the manufacture of thick silk. The ribbon manufacture was continued for several years, and made such progress that Mr Fulton had at one time in his own employ above sixty looms at work; besides engine looms for the manufacture of narrow ribbons. The demand, however, for silk gauze increasing, and it affording full employment and higher wages to the workmen, the manufacture of ribbons was gradually dropped.

The manufacturers of Paisley and their workmen, are entitled to much credit for the great degree of

perfection to which they brought the manufacture of silk gauze. By their ingenuity and their taste, they produced gauzes, which, in the excellence of fabric and elegance of pattern, far exceeded those of Paris, Lyons, and Spittalfields, the original seats of that manufacture. The same ingenuity and taste have, as has been already observed,[a] been employed in the manufacture of muslins: and we may here add, with such success, that while about 35 years ago, all the muslins used in Britain, perhaps in Europe, were imported from the East-Indies, a very considerable portion of the fancy muslins manufactured in Paisley has, for several years past, been exported to India.

The present state of the silk manufacture in Paisley has been already slightly mentioned:[b] but since the end of 1811, when that part of this work which relates to manufactures was prepared for the press, considerable alterations have taken place in this branch of industry. There were then very few looms employed in the manufacture of silk goods of any description: there may be now, (Dec. 1812,) though the manufacture of ribbons is not resumed, about 100 looms employed in weaving silk fabrics, consisting of richly ornamented shawls and plaids, and net silk gauzes used for vails.

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a See page 254.
b See page 243.

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STEPHEN YOUNG, PRINTER.